

THE DENTAL DIGEST



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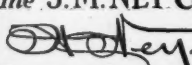
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THE DENTAL DIGEST

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HABIT IN THE SELECTION OF TOOTH FORMS

BY GEORGE WOOD CLAPP, D.D.S., NEW YORK

(SECOND PAPER)

DR. WILLIAMS' DISCOVERIES IN NATURAL TEETH

When Dr. Williams had succeeded in interesting the members of the dental profession in a concerted demand upon tooth manufacturers for improved forms in artificial teeth, and had induced manufacturers to listen to that demand, he was confronted with a question which no one had satisfactorily answered before. It was very simple and direct, as most great questions are, but it had already taken him ten years to get into position to begin the answer, and it has taken him and his associates ten years since then to partly complete that answer.

That question is, "What forms of artificial teeth are required to make it easy for dentists to effect fine prosthetic restorations?"

It seems that such a question should be easily answered by almost any dentist to whom it might be addressed. If there is anything dentists should know about, it is teeth. And as the forms of the anterior teeth are readily perceptible in thousands of people, one would think that every dentist would know the characteristics of at least the upper centrals and laterals. But we have been so busy with the pathological manifestations, that we have hardly thought about the forms of perfect teeth which needed not our attention.

When this question presented itself to Dr. Williams he made an immediate answer, which was both correct and complete so far as the words went. But that Power of the Past to which I referred in the first article kept the words from meaning to him what they mean to him now. And more than ten years were spent in getting out from under the influence of wrong teachings and into an air of mental freedom.

Dr. Williams answered the question as to what forms of artificial teeth are required by saying, "Forms similar to those seen in the most pleasing natural dentures." That answer was correct and complete then.

It is correct and complete now. And we need only to learn what the words mean to be in possession of all necessary working knowledge upon the subject. I know of two men, who together, have spent 30 years finding out a part of just what those words mean. Fortunately, what they have found out can be told, even in this conversational way, in a relatively short space.

SEEING FORMS IN NATURAL TEETH

If one has access to a collection of extracted natural upper central incisors, and will lay them out so that the labial surfaces are flat before the eyes, the teeth will seem at first glance to present as many outline forms as there are teeth. And if one is to consider every peculiarity of proportion and curvature, this statement will always be true.

But from the point of view of the prosthodontist a classification of tooth forms based on minute variations is impracticable for many reasons, a few of which will be sufficient here. The first is that he does not always have any remaining natural upper teeth from which he can determine just what minute variations he needs. Another reason is, that if the teeth for such a classification were to be reproduced in porcelain, the number would be so great that proper selection would be very difficult and tedious and few depots could carry the necessary stocks. A third reason is, that such a classification would require a very much more extended and intimate knowledge of tooth forms than most dentists will bother to acquire.

What prosthodontists must have to make their work successful is a relatively few forms of teeth with which the essential requirements of fine restorations can be met.

If from the many forms of upper centrals, as established by the minute variations of proportion and curvature, one is to select a few forms which will meet the requirements of a great many minutely varying forms, it is evident that one must either omit entirely the minute variations or leave them to be made by the individual dentist, and that one must select certain forms to which a great many of the teeth are similar in general proportions and form, even if they differ in small details. That is, one must select on the basis of general proportions and outlines.

It seems strange now that on this matter of selecting forms Dr. Williams was held up for some years by that very Power of the Past to which reference has been made. He knew what he wanted to see, but he couldn't see it because he saw all teeth through the teachings upon which he had been reared. He accepted it as established that there were temperamental forms of teeth and racial forms, that people of the nervous temperament had one form, people of the bilious temperament an-

other, and so on through the temperaments. And for some years he tried to sort teeth by these temperamental characteristics without making progress or seeing anything clearly.

Finally, one day, while sorting teeth for perhaps the thousandth time, he discovered that his subconscious mind had been seeing the teeth as they were and not as his conscious mind had been determined to see them, and had sorted them into little groups according to general outline form. His conscious mind was startled by what had been done, for the thing done contradicted the things learned so long ago and always carried in mind as controls. Instead of the indefinite forms prescribed by the temperamental theory, there were a relatively few forms and an evident inter-relationship among them. Resolutely holding his mind open to the new light, and closed to the Power of the Past, he studied the forms closely. Three of the forms were much simpler and ruder in outline than the others. He felt that these must be the original or *typal* forms. Here his artistic training served him in good stead. For, after a little study, he saw that the other forms were evidently combinations of the elements of the original forms. He speedily classified all the natural teeth in his possession only to find that the classification first effected by his subconscious mind was confirmed.

To one brought up in the temperamental theory, as Dr. Williams had been, this discovery was both disconcerting and illuminating. It promised to destroy what the temperamental theory had taught, but it promised also to clear away the perplexities and to point the road to proper and unlimited progress.

Possessed by his discovery, Dr. Williams rushed to the museums in London, where he had access to the great collections of crania. In every race from which even a dozen skulls exhibited the upper centrals, he found the same three primal, or as he called them, "*typal*" forms, and the other forms which could be made from them. And in spite of the most painstaking search there and in other cities, he was unable to find any forms which could not be shown to be either one of the *typal* forms or a combination of their elements.

Here, then, was part of the answer to the question as to what forms are required in artificial teeth. It is apparent that the three *typal* forms at least were necessary.

But these facts were only the first part of the answer, as he was soon to learn. For while the *typal* forms were present among the crania of all races, and he speedily learned to demonstrate them in living persons, they formed only a small part of the total number of teeth. It seemed to him then and still seems that more than a majority of the total number of teeth are in combinations, or as we say, "*modifications*" of the *typal*

NATURAL UPPER CENTRALS - SQUARE TYPE.



Nearly straight, nearly parallel approximal surfaces, wide necks, medium bulging labial surfaces.

NATURAL UPPER CENTRALS - TAPERING TYPE



Nearly straight approximal surfaces diverging strongly downward. Medium necks. Rather flat labial surfaces.

NATURAL UPPER CENTRALS - OVOID TYPE



Convex approximal surfaces with characteristic double curve high on distal. Wide necks.

FIG. 1

TYPAL FORMS, NATURAL UPPER CENTRALS

These typal forms have been demonstrated in every race from which we have even a dozen skulls showing natural upper centrals. They are identical in the fairest and the darkest skinned races. They were as common 5,000 B. C. as to-day. They are also found in the man-like apes.

forms. How many of such modifications and which ones would be most advantageous to dentists?

The search for the answer to that question has been continued since the day, now nearly ten years ago, when Dr. Williams first asked it. Much of value to every prosthodontist has been accomplished, but the end is not yet. It will prove profitable and may be entertaining to understand, merely in outline, what has to be done and how it is being accomplished.

The three primal or tupal forms which Dr. Williams isolated are so distinctly unlike each other that scarcely a trace of resemblance can be found. One has nearly straight and nearly parallel sides for a considerable distance upward from the incisal edge, so that the necks are nearly always wide. From its general appearance, this form is called the "square" type. A second has nearly straight approximal surfaces diverging strongly downward, and in the finest specimens, a faint double curve low on the distal surface. This type is called, from its appearance, the "tapering" type. The third type has a convex mesial surface and a much more convex distal surface with a pronounced double curve high on the distal surface. The necks are wide or medium wide. From its rounding outlines, this type is called "ovoid." These forms in upper centrals are shown in Fig. 1 and in upper laterals in Fig. 2.

It is easy to identify the tupal forms because they are so pronounced and so unlike. But they have combined in nearly every conceivable proportion. And the great task has been to choose among these combinations.

If from a great number of natural teeth one takes the most pronounced tapering form and the most extensively modified form which can be seen to have the tapering characteristics dominant, it will be found that the extent of modification between the two can be well bridged by inserting between them three forms in differing degrees of modification. That is, if one has on one hand the tupal tapering form, and on the other the most extensively modified form with the three selected forms between them, the five forms will cover the range of form in tapering teeth as shown in Fig. 3 and explained in the caption.

It is not to be expected that five or six forms of tapering teeth will provide an exact duplicate for every tapering tooth. That is quite impossible, because thousands of tapering teeth will exhibit some modification of the tapering type which is between any two of these. All that is claimed is that the difference between one or two of the selected forms and any other tapering tooth will be slight and generally imperceptible to any except the trained observer and that in all prosthetic work the selected form will answer excellently, or is easily capable of modification

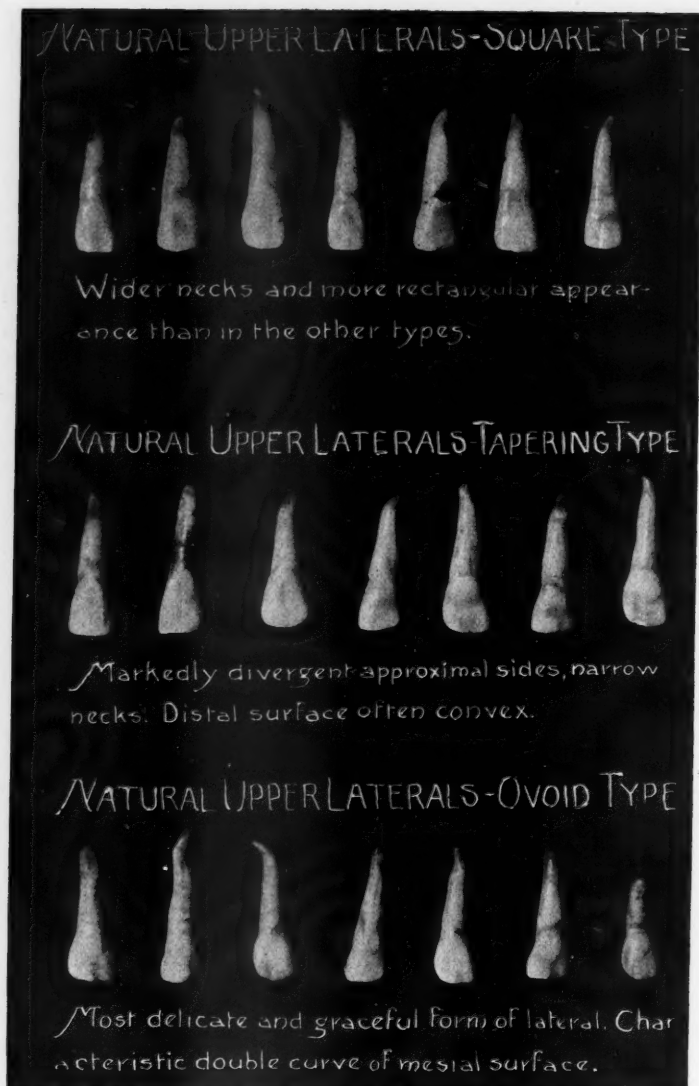


FIG. 2

TYPAL FORMS, NATURAL UPPER LATERALS

While the forms in laterals are different from those in centrals, they are just as distinctive and play a part in Nature's esthetic plan for the mouth which is seldom sufficiently appreciated. Note the dainty laterals in the lower row which have been characteristic of the ovoid type for thousands of years.

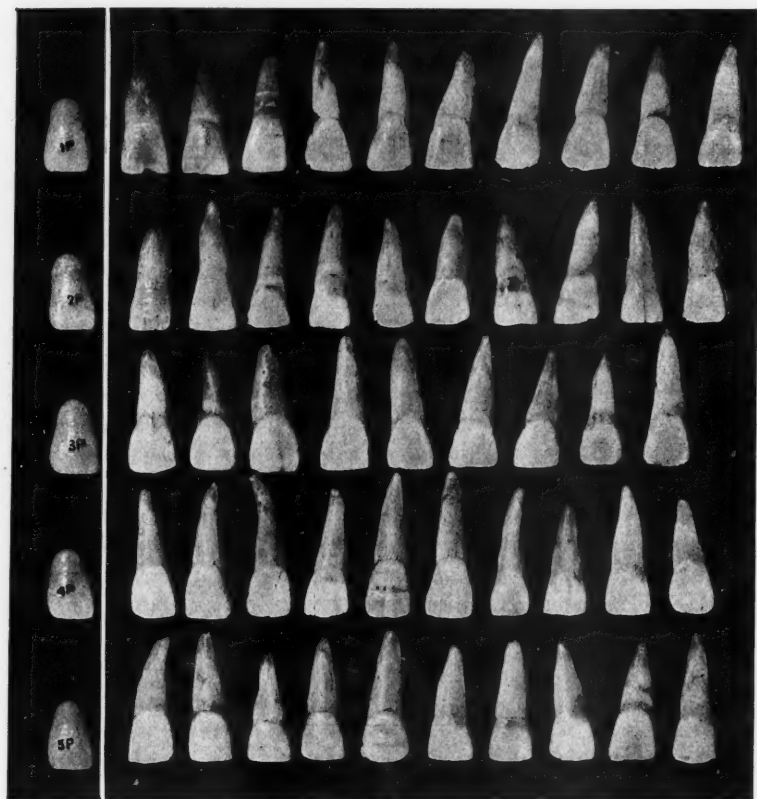


FIG. 3

THE RANGE OF TYPAL FORM MODIFICATION

The upper row shows natural upper centrals of the tynal tapering form.

The fourth row from the top shows the most extreme combinations of the tynal tapering and tynal ovoid, in which the tapering is visibly dominant.

The distance between the tynal form and the fourth row is pretty well spanned by the forms in the second and third rows.

The vulcanite tooth shown at the left of the upper row expresses Dr. Williams' understanding of the tynal tapering form, slightly modified to suit modern faces and denture restorations. The vulcanite tooth at the left of the fourth row expresses his conception of the fourth tapering form. It will be seen that the second and third vulcanite teeth are gradations of form between the first and fourth.

The fifth row of natural teeth represents the modification of the tynal tapering form by the tynal square form, with the tapering form dominant.

by the dentist. This will become more apparent when Trubyte crowns are ready for the profession.

When we come to the selection of artificial teeth to harmonize with face forms, it is not to be expected that the selected forms reproduced in artificial teeth will provide a mathematically correct tooth for every

form of face. Tooth selection is not likely to be made into an exact science, because of uncontrollable factors. But it can easily be demonstrated that one or two of the selected forms will be as nearly an exact match for the face as the natural teeth usually are, and incomparably better than anything we have had in the past.

This article is already too long, but it will do no harm to lengthen it enough to summarize what it has tried to say, which is that after many years of servitude to the temperamental theory, Dr. Williams discovered the three elemental or typal forms in natural teeth, that he demonstrated their presence in all races of man from which we have even a dozen skulls exhibiting upper centrals, and in the anthropoid apes; that he has isolated the combinations of the typal forms which, in artificial teeth, are incomparably advantageous to prosthetists; that he expects to spend the remainder of his life in acquiring and making public additional knowledge along the same line; that the forms he has isolated and reproduced arrange themselves naturally into a simple and logical system, and they make effective for the first time in our professional history, the easy and scientific selection of artificial teeth to harmonize either with remaining natural teeth or with edentulous human faces.

And this summary will bring us naturally to a talk, next month, on the Principles of Scientific Tooth Selection.

THE GENTLE ART OF READING

The reading of books, what is it but conversing with the wisest men of all ages and all countries, who thereby communicate to us their most deliberate thoughts, choicest notions, and best inventions, couched in good expression and digested in exact method.

WITHOUT BOOKS

Without books, God is silent, justice dormant, natural science at a stand, philosophy lame, letters dumb, and all things involved in Cimmerian darkness.

SERIAL EXTRACTION IN PYORRHEA

By W. CLYDE DAVIS, M.D., D.D.S., LINCOLN, NEBR.

For some months I have been using serial extraction in mouths where pyorrhea was general, in the treatment of systemic lesions. The result has been very marked.

I think they are more than equal to the injection of a specially prepared autogenous vaccine. To go over the entire subject it would be necessary to write a fairly good sized treatise on micro-organisms of the mouth.

I therefore ask my readers to refresh their memories on forms of bacteria usually found in these oral infections. Also study the theories of the conditions of altered reactivity on the part of the body which comes about as a result of infection, and designated by the term Allergy. Review the theories of immunity; also the development, source, and disposition of anti-bodies.

Again go over the process of the development of anaphylaxis. Make a short review of vaccines and their uses. Also the methods of producing autogenous vaccines and their particular use in combating the general lesions which the parent bacteria have produced.

We are now ready to intelligently undertake the treatment I will here outline. With each individual case, a record similar to the one which just follows should be kept.

Name.....Age.....
 Residence.....
 Date of First Consultation.....
 Systemic Disorder.....
 Temperature.....Blood Pressure.....Pulse Rate.....
 Radiograms.....
 Advice.....

CLINICAL HISTORY

Date.....Operation.....
 Blood Pressure.....Temperature.....Pulse Rate.....
 Remarks.....
 Date.....Operation.....
 Blood Pressure.....Temperature.....Pulse Rate.....
 Remarks.....
 Date.....Operation.....
 Blood Pressure.....Temperature.....Pulse Rate.....
 Remarks.....

For convenience we will take a case where most of the teeth are in the mouth; the teeth are loose from pyorrhea, or those which are not loose have been filled and the X-ray shows abscessed conditions in the apical region. General extraction is decided on in this case.

The first sitting we extract one, two or three of the teeth. Six or seven hours thereafter there will probably be a febril reaction showing a rise of temperature from one to three degrees. This generally subsides within a few hours.

From your previous review in bacteriology you will see the reason why the next sitting should be from eight to twelve days after the first. I generally make an appointment for the eighth day. If the general trouble from which the patient is suffering is worse at this time, I postpone the operation for two or three days.

I continue the extractions in these periods of about eight days to completion of the case.

Each time I open the tissues in extracting, I infect my patient, which has the same result as the injection of an autogenous vaccine. During the process of extraction I try to avoid and not operate on the twenty-first day from the first operation. You will get the reason in the study of theories pertaining to anaphylaxis.

By this method my surgical work acts as a treatment with benefit to the general lesion present. In case there is a general weakness due to oral infection, though the same has not manifested itself, I am giving such patients just the treatment they should have looking to the checking of further development of their latent organic trouble.

I have many dozens of cases, both private and in my clinic, wherein cures have been most prompt and marked.

I will cite just one case and leave the methods with the profession for a trial:

Mr. H., sixty-six years old, blood pressure 210, temperature two degrees above normal, a flow of pus from around every one of the twenty-six teeth, most of them loose.

First sitting in April, extracted three teeth. His daughter is a nurse and reported two additional degrees of temperature six and one-half hours after operation. Eight days later blood pressure two hundred, two degrees temperature, extracted four teeth. Seven hours later the reaction only showing one additional degree of temperature. Eight days later extracted six teeth, blood pressure 175, no temperature, no reaction. Eight days later blood pressure 160, no temperature, extracted remainder of teeth, slight reaction that night.

His blood pressure has been taken once a week now for four months,

and the temperature is generally normal, and I have not found this blood pressure above 160 on any occasion.

I have secured similar results in rheumatism, neuritis, and many organic troubles.

I assure my brother physicians and dentists that the method is worth a trial.

In the treatment of pyorrhea a similar general effect is produced if two or three teeth are curetted at each sitting, with about eight days between sittings. At each visit thoroughly curette the alveolar borders, opening the blood stream to a small amount of additional infection to act as a vaccine.

SCIENCE A POWER

Science is a beautiful thing, undoubtedly, and of itself well worth all the labor that man may bestow upon it; but it becomes a thousand times grander and more beautiful when it becomes a power; when it becomes the parent of virtue. This, then, is what we have to do; to discover the truth; to realize it out of ourselves in external facts, for the benefit of society; in ourselves, to convert it into a faith capable of inspiring us with disinterestedness and moral energy.

THE STRANGER

"Who's the stranger, mother dear?
Look, he knows us—ain't he queer!"
"Hush my own, don't talk so wild;
He's your father, dearest child."
"He's my father! No such thing.
Father passed away last Spring."
"Father didn't die, you dub,
Father joined a golfing club.
But they've closed the club, so he
Has no place to go, you see—
No place left for him to roam—
That is why he's coming home.
Kiss him—he won't bite you, child;
All them golfing guys look wild!"

DENTAL LAWS

DENTAL LICENSE REQUIREMENTS IN THE UNITED STATES AND CANADA

BY ALPHONSO IRWIN, D.D.S.

GENERAL INFORMATION

In response to numerous queries, we note the following general conditions: A number of Boards of Dental Examiners "exercise their discretion about granting a license to practise dentistry without an examination." The occasion calling for the use of this prerogative, however, must be very unusual, or the credentials of the applicant must be very meritorious. Direct communication should be addressed to the Secretary of a Board for instructions in regard to this suspension of rules. We venture the assertion that the exigencies of the war will call more frequently for such action.

It should be observed that the Spanish language may be permitted in the examinations in the Philippine Islands and Porto Rico.

The moral character of the candidate must be certified to by one or more legal, ethical dentists, resident in the same State; under a reciprocity application the endorsement of two resident freeholders is also required, both as to character and professional attainments, the interchange candidate being exempt from the theoretical examinations only, and taking all practical tests. Stricter attention is being paid to the moral character of applicants, and the personal acquaintance of the sponsor is essential.

Preliminary Education: The new dental laws require a four years' course of study and an accredited High School diploma, or its equivalent, some specifying the number of units, others the certificate of the State Superintendent or Supervisor of Public Instruction or Education. Fourteen units are specified in a few States, fifteen standard, or earned, or Carnegie, units or seventy-two Regents Counts, in other States.

Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, New Jersey, New York, North Carolina, Ohio, Pennsylvania, are (reputed to be) very strict about preliminary educational standards; while Louisiana, Maine, Mississippi, New Hampshire, Oklahoma, South Carolina, Tennessee, Vermont, Virginia, and West Virginia have advanced their pre-dental educational requirements.

Among the laws which fail to provide a clause establishing a literary standard, are Arizona, Arkansas, Connecticut, Delaware, District of Columbia, Georgia, Idaho, Maryland, Massachusetts, Montana, New Mexico, Rhode Island, South Dakota, Washington, Wyoming, Alaska, Hawaii, Philippine Islands, Porto Rico.

Indiana, Louisiana, Mississippi, Missouri, Oregon, Wyoming, and other State Boards, accept the Standards of the National Association of Dental Faculties; in the words of some laws: "the college entrance credits." If doubtful about these credits, some examiners, such as those of Kansas, Kentucky, Tennessee, Missouri, and other States investigate and judge them according to their grade values and authenticity.

A number of Boards exact the standards of the National Board of Dental Examiners, such as Arkansas, Colorado, Florida, Kansas, Kentucky, Louisiana, North Carolina, Nebraska, Utah, and other Boards. These Associations publish standards for preliminary as well as professional education.

State University entrance requirements are specified in the laws of California, Illinois, North Dakota, and Utah, as acceptable literary qualifications from an applicant for a license to practise dentistry.

Where a State is mentioned in more than one of the preceding group, it must not be concluded that the statements are either a repetition, or a contradiction, for they are neither. Literary standards approximate, if they are not actually identical, in different institutions, and the equality as well as the differences must be gauged by the examiners, in addition to the validity of the credentials being verified by the Board. Dental candidates present all degrees of fitness, from those utterly lacking pre-dental education up to those possessing the degree of a literary college, and the uneducated dentist must apply for a license in the state which makes no *legal* barrier of this fact.

In many states it is very wisely left to the judgment of the examiners themselves, whether a standard of pre-dental education shall be established; and if so, what it is to consist of. The same power is delegated to the Board specifically in many state dental laws, conferring authority to fix the standard of professional excellence to be demanded from candidates.

Professional Education: The new dental laws require a diploma from a reputable, registered, recognized or standard dental college; this means a full three year dental course. After January 1, 1921, Illinois, New York, and Pennsylvania specify a four year dental course in a registered dental college. A similar attempt was made nearly twenty-five years ago, and the result of raising the standard of dental training will be awaited with

interest; the conditions prevailing at that time were more auspicious for such a move, than they are to-day.

Non-Graduates: It is noticeable that Texas examines "any one." Arizona examines five-year practitioners "if they possess a license in another state"; Connecticut examines lawful ethical practitioners of three years' standing; Idaho "of four years' practice"; Montana, Utah, New Hampshire, Nevada, examines "five-year practitioners"; Utah also examines two-year practitioners and three-year dental students; Kansas examines "undergraduates," but does not give them a license "until they receive their diploma"; Tennessee "examines Juniors for credits"; Virginia examines five-year "legal and ethical practitioners."

Owing to the general character, omissions or wording of several dental Acts, it is legitimate to conclude that non-graduates *may* be examined and licensed to practise dentistry in several States. Whether they do or not, is optional with the Board, apparently. Among the number may be mentioned: Arizona, Alabama, Alaska, Connecticut, District of Columbia, Delaware, Idaho, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, Nevada, New Mexico, North Dakota, North Carolina, South Dakota, Texas, Wyoming.

The dental Acts of the United States contain clauses directly providing for non-graduates, or two, three, four and five-year practitioners, or their reciprocity clauses are so incomplete as to render them susceptible to the interpretation that non-graduates may be examined and licensed, if the Board of Dental Examiners so decide. In illustration of the latter point, the Utah reciprocity clause, Section 14, is specific in this respect, for it says: "to any applicant who furnishes satisfactory proof that he is a *graduate* of a reputable dental college." Other acts fail to provide for such credential in their reciprocity enactments, except Maryland, Michigan, and Tennessee.

The *Reciprocity* clauses of Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Idaho, Illinois, Iowa, Kansas, Louisiana, Maine, Massachusetts, Minnesota, Missouri, Montana, New Hampshire, New Jersey, North Carolina, North Dakota, Ohio, Oklahoma, Vermont, West Virginia, Wisconsin, Wyoming, and Porto Rico, *fail to stipulate* that the *interchange candidate must possess a diploma from a dental college, although all other qualifications necessary are named.* The fact that the states of Maryland, Tennessee, and Utah recognize the necessity for stipulating in their laws that the reciprocity candidate shall possess a diploma from a reputable dental college proves that it is essential in order to make the requirement legal and Boards failing to be governed accordingly make

themselves *liable* for the *consequences*. It is exceedingly doubtful if these States can *legally* exclude the non-graduate from examinations, if otherwise he or she is qualified under the *Reciprocity Act*.

Apprenticeship System: The apprenticeship system is *not* recognized under the enactment of Nevada, which required in the older law: "four years of twelve months each, with a licensed practitioner of dentistry in the State of Nevada." A similar proviso formerly existed in several western states, but this clause appears to be omitted in later amended laws. Therefore this means of obtaining a license is abolished.

Undergraduates: The District of Columbia, Kansas, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New York, South Carolina (Juniors also), Tennessee, examine third-year dental students or seniors. The twenty-five and six-year clauses in the New York law, and the ten-year provisos in the Maryland and Pennsylvania laws, offer opportunities to ethical practitioners of those classes to obtain a license.

Examinations: All examinations are practical, operative, prosthetic, clinical, theoretical, oral, or written, upon subjects and tests taught in a standard dental college. The Michigan dental law requires as subjects for instruction in a standard dental college: "Anatomy, Chemistry, Physiology, Histology, Materia Medica, Therapeutics, Dental Metallurgy, Pathology, Bacteriology, Operative Dentistry, Prosthetic Dentistry, Crown and Bridge Work, Oral Surgery, Orthodontia, and Oral Hygiene." With slight variations or additions these subjects may be regarded as typical throughout the United States.

Practical Tests: The practical, operative, and prosthetic tests vary in different states, territories, islands, and provinces. Moreover, many Boards change them frequently and announce what they are to consist of just prior to each examination, hence an attempt to classify them would be futile. The Ohio requirements, however, are illustrative, namely: "gold, amalgam, and synthetic fillings; articulating of a full denture and making a Richmond Crown." Iowa requires: "gold and amalgam fillings, an inlay, a crown, setting up a full upper and lower denture to the point of flasking." The New Jersey tests are comprehensive and explicit, namely: "approximal gold filling with the approximating tooth in position, compound approximal amalgam filling, a silicate filling, test in oral prophylaxis, cavity preparation for inlay with wax pattern of same; Prosthetic Work: Soldering bridge three or more teeth, exclusive of abutments, one Richmond crown which may constitute one abutment (metal used gold or silver), impression, dies and counter-dies must be submitted;

also wax bite, anatomical articulation of a full upper and lower denture (plain teeth), for vulcanite. imbedded in wax on trial plate."

Canada: The requirements of the Province of Ontario are characteristic and typical of Canada. "The subjects in which examination shall be passed before receiving a certificate of license to practise dentistry in Ontario are: Physics, Anatomy of the Head and Neck, Dissection of at least two parts, Comparative Dental Anatomy, Chemistry, theoretical and practical, Bacteriology, Physiology, Histology, general and dental, Materia Medica, Therapeutics, Pathology, Surgery, Medicine, Physical Diagnosis, and Anaesthesia, Dental Technique, Operative Dentistry, Prosthetic Dentistry, Crown and Bridge Work, Orthodontia, Dental Jurisprudence and Ethics, History of Dentistry, Preventive Dentistry and Dental Economics, Operations for Patients, operative and prosthetic, and such other evidences of knowledge and skill in dentistry as the Board may from time to time prescribe."

The practical tests of British Columbia are specific: "The applicant will be required to do the following work in the mouth: A full and partial denture (vulcanite, not less than four teeth), full and partial denture (gold or silver, not less than four teeth), bridge (not less than four teeth), two gold fillings, two amalgam fillings, and a porcelain inlay for deposit with the examiner."

Notice that the Province of Quebec requires the degree of B. A. or in lieu thereof an examination for preliminaries. The license fee of \$60; either of two degrees are conferred by the Quebec Colleges, the Doctor of Dental Surgery, or Bachelor of Dental Surgery; also Manitoba states "that there will be no examinations until after the war for license." We opine other Boards will be compelled to follow suit.

The almost universal adoption of a reciprocity act is noteworthy. The Province of Quebec "Board is now considering the adoption of reciprocity; seven other provinces practise it, while nearly all the Examiners in the United States favor interchange of licenses, only about fifteen boards dissenting."

Army Dentists: Announcement in June of the discontinuance of the acceptance of applications for entrance into the Army Reserve Dental Corps was made, for a period of six months. These statements would indicate that about six thousand of our most capable young dentists have been selected to attend to the dental needs of approximately six million soldiers and sailors, already enrolled or about to be enrolled in the service of the United States. The withdrawal of such a large number of dentists from civil life leaves vacancies hard to fill. While the decrease in the num-

ber of dental college matriculants does not aid in the solution of a problem facing our profession, the public, Dental Examiners, and Faculties, as a direct result of the war drain upon twenty million eligible students, out of whose ranks the prospective dentist must come.

The Naval Dental Corps: The crux of the provision for the Naval Dental Corps approved Amendment No. 23, reads as follows: "All appointees authorized by this Act shall be residents of the United States between twenty-one and thirty-two years of age, and shall be graduates of standard medical or dental colleges and trained in the several branches of dentistry and shall, before appointment, have successfully passed mental, moral, physical, and professional examinations before medical and professional examining boards appointed by the Secretary of the Navy, and have been recommended for appointment by such boards; Provided, That hereafter no person shall be appointed as Assistant Dental Surgeon in the Navy who is not a graduate of a standard medical or dental college."

While the rank is limited to lieutenant commander, provision is made for pay and allowances to the rank of captain and commander.

"The appropriation bill as it now stands, provides for thirteen dentists with the rank of commander. The department believes that dental officers should not be commissioned in a grade above that of dental surgeons with the rank of lieutenant-commander, for the reason that it has no billets, nor can it foresee any billets in the future, in which a dentist of such high rank can be employed, certainly not to the number of thirteen."

Examinations: "Examinations were held in Washington, New York, Philadelphia, Norfolk, Great Lakes and San Francisco. The complement of the naval dental corps is one dentist to 1,000 of the total personnel." This provides for the appointment of about four hundred dentists altogether, so far. The compensation varies, and is regulated according to a pay list supplied by the naval authorities.

We are advised "that at the present time no vacancies exist in the Dental Department of the Navy," W. C. Braisted, Surgeon-General, U. S. Navy.

While no official intimation to that effect is available, the possibilities of vacancies occurring in either the Army or Navy Dental Corps, or of applications being received again, should enhance interest in this field of operation for the dentist.

The military dental training schools of the United States now in operation present a unique opportunity to the ambitious dentist to acquire

the most masterful knowledge of his profession ever offered anywhere or at any time in the world's history. The clinical field of dental and oral operations will be enlarged and magnified even after the last suffering and mutilated victim of this war shall have been put in his grave. The candidates whose applications have been accepted are to be congratulated, and the dental profession will rely upon them to fill creditably the positions opened to them. If they prove equal to the tasks assigned them, no honor is too great or no position of trust within the gift of the dental profession is too high to bestow upon them as a reward in after life, as they attain the climax of their usefulness.

SHE SUNK A U-BOAT

This little lady was a blonde and weighed only 105 pounds and clerked in a department store for \$12 a week. She had never been to Chicago, yet she sank a German U-Boat. Is that fighting? You bet it is!

BY GUY HUBBART

Her name is Lilly Frill. She sells laces in a small-city department store less than 300 miles from Chicago. She had never been to Chicago. It took too much money. Her beau, one of the boys in the store, marched away to war. Lilly wept for a day or two, of course. She missed her beau. Any girl would weep.

But Lilly didn't weep long. She laid aside tears and began to fight. She fought right there in her little home town. She began to sell War Savings Stamps along with laces and neckwear and things. She had read that one depth bomb would shatter the biggest U-boat afloat, and she knew the U-boats were lurking for the transport that carried her beau over seas. She asked someone how much it took to manufacture a depth bomb and when she found out she took the amount as her share of the fighting and started out to sell War Savings Stamps up to that amount at least.

"Money'll stop those pirates," Lilly said to herself, "and I'm going to stop one. I am going to sell a Thrift Stamp or a War Savings Stamp to every customer who comes my way."

Lilly Frill did it. She's doing it yet, a little girl, blonde and slender and not so very pretty. Think it over a moment, Mr. Merchant! How many Lilly Frills have you got in your store who would like to fight? You've got a good many. Help them to sell stamps to get money to crush the German army and the German U-boats. We'll win if you do.

Remember what Lilly said—"I'm going to stop one U-boat." She did—with Thrift Stamps.



PREPAREDNESS LEAGUE OF AMERICAN DENTISTS

NOTES AND NEWS

Communication from the President.—We are starting on our third year with the following officers elected at our annual meeting in Chicago on Aug. 9, 1918:

President—J. W. Beach, Buffalo, N. Y.

Vice-President—J. D. Millikin, San Francisco, Cal.

Secretary—O. A. Oliver, Nashville, Tenn.

Treasurer—L. M. Waugh, New York, N. Y.

Representing the Surgeon-General's Office—Lieutenant J. V. Gentilly, New York, N. Y.

Director General—W. D. Tracy, New York, N. Y.

We deeply regret the resignation of Dr. C. F. Ash as Director General, but activities in other directions made it imperative. He has been appointed a member of a committee for the conservation of platinum, an office which will occupy a large share of his time. His service as Director General have been of inestimable value to his country and to the League and a more efficient incumbent could not have been found. I know every member joins me in these sentiments, together with good wishes and the hope of long service to his Government.

The assurance given by Dr. Ash that his interests are with the League at all times, also that his services will be given just as freely as before, has somewhat mitigated the effect of his resignation, but nevertheless, we shall greatly miss his active management of so important an office as that which he so ably occupied.

The New Director General.—Dr. Tracy, our new Director General, has been Director for the Department of the Northeast as well as Chairman of the New York Unit of the League. He is, therefore, especially qualified to assume the broader duties, inasmuch as he has been, as it were, the understudy of Dr. Ash.

No better selection could have been made following Dr. Ash and it gives me great pleasure and satisfaction to indorse him in every particular. This step means for him great sacrifice, but he has offered himself willingly and gladly to this great service. Every worker of the League will receive fullest coöperation from his department and I know he will receive equal return from our members and the benefits of our work will continue to increase.

We have a great work before us, for the League is developing into a real public service institution. We have at present no less than eight distinct objects, each of which demands special service from our members. The League is in position to direct all members of the profession to give full service to the great cause in our own special field. We have no need to look elsewhere for work to do.

Let each one of our army of 18,000 members become an ardent, conscientious worker in the vineyard of humanity, for the success of the Colors and the triumph of justice and right.

Colonel Logan and the League.—In his President's address before a great audience of more than 5,000 people in the Auditorium Theatre, Chicago, on the evening of August 6, last, Colonel Logan, as President of the National Dental Association, spoke in most appreciative terms of the service the members of the League have rendered in making the registrant dentally fit for military duties. We are deeply grateful for such expression, yet feel that our members are justly entitled to it. No one will ever know the amount of free service given by the dentists of America, not more than one-third of which will ever be recorded.

A suggestion was made by Colonel Logan that, inasmuch as the military camps are now well equipped, the army dental department is in a position to do the necessary fillings for the recruit after entering the service; therefore, it is his desire that the League give special attention to reclaiming the dentally unfit in order to place them in Class A. By so doing, the dentist may render the greatest service to the Government by augmenting our fighting forces.

This suggestion is both timely and needed, particularly as the draft age has been extended to include a vast army of men who will need fixed bridgework to put them in the firing line. To do this means time, money and sacrifice for all of us, but we *will do it* without question or complaint. It is our duty and no right-thinking dentist can side-step the issue.

Continue doing all necessary fillings and extractions as heretofore, for *there is more dental work needed* by our soldiers than could be done if *every one* of the 50,000 dentists of the United States should devote his whole time to this purpose. Shoulder the additional burden manfully

and cheerfully for the sake of our own boys who are laying down their lives by the thousands that we may spend our declining years in our own peaceful country and under the protection of the flag that shall bring enduring democracy to the whole world.

Assure Colonel Logan of our coöperation in this way.

The Wheels of the League.—The Dental Motor Car exhibit in Grant Park, opposite the Auditorium Hotel, during the meeting of the National Dental Association at Chicago, proved to be one of the most interesting features of the convention. Chairman Weaver secured a host of friends for the car and its future usefulness is assured. The Red Cross soon will begin shipping them overseas for active service at the front.

It remained, however, for Dr. Ottolengui to again demonstrate his resourcefulness and originality of thought by inaugurating a plan for securing a Dodge motor car for the special use of the dental officers in each military camp. This movement is much needed, as a motor car will greatly increase the usefulness of the officers by transporting them rapidly on their daily round of duties.

Through his activity, ably assisted by Dr. F. M. Casto, more than \$1,100 was raised in less than one hour at the meeting of the American Society of Orthodontists and he immediately ordered a car delivered at Camp Greenleaf. Another one has been ordered for Camp Upton and more will follow as rapidly as possible. These cars will be presented through the League and will pass from commandant to commandant as changes occur in the camps.

Our Study Course.—One of the most urgent duties of the League is to make available a course in war oral and dental surgery for the civilian practitioner. We are exerting every effort to have it ready as soon as possible. Some delay has been caused by unavoidable circumstances, but League members may be sure no further delay will occur.

J. W. BEACH, *President.*

Communication from Director General Tracy.—While it is true that as the Dental Corps of the United States Army increases in numbers and efficiency the need for volunteer services on the part of the Preparedness League in connection with filling operations will correspondingly be reduced, it is not intended that the activities of the League shall be curtailed in this respect at present, as the accession of men from the new draft will be greater, both as to numbers and rapidity of induction than heretofore. It is, on the contrary, absolutely necessary that greater impetus and effort be given to our work.

Bridgework.—It is also desirable that the scope of our work should be broadened to include the restoration of those registrants who are physically fit for General Military Service, and are held in Group C solely because of their dental deficiency.

A large percentage of these cases can be restored by the insertion of small bridges, thus bringing them up to the minimum dental requirements of six masticating teeth in occlusion, and six incisive teeth in occlusion. No extensive restorations by bridgework are contemplated. In other words, only those cases are recommended for treatment which can be brought up to minimum requirements by the insertion of a small and inexpensive bridge.

At present there is no Government regulation compelling registrants in the class mentioned to have this work done at their own expense, and no provision exists making it possible for them to have this work done at the cantonments.

Most of the men mentioned above are anxious to be made dentally fit in order that they may be inducted into General Military Service and thus be of use to their country in the fighting line. I have found that with few exceptions the Local Boards, throughout the country, are very appreciative of the dental services which have been rendered to the registrants under their control, by the members of the Preparedness League of American Dentists, and I am sure if it is known that we have a large list of volunteer dentists who have offered to take cases of the type outlined above, a great number of registrants now standing in Group C can be restored and immediately transformed to Class 1-A.

It is, therefore, plainly the duty of every member to write to the League officer in charge of the work in his section notifying him that he will be glad to take one, two or more cases each month, without expense to the registrant, the League or the Government.

Families of Soldiers.—Our activities should also embrace the care of dependent families of our soldiers, sailors and marines, who are unable to pay for dental services.

It has also been stated that one of the greatest possibilities for service on the part of the Preparedness League and its members would be a full and free coöperation between the League and the Home Service Section of the Red Cross.

In many instances the wives and families of soldiers in the U. S. Army who have been accustomed to private dental treatment, but who, because of the reduction in their incomes cannot now afford to go to a private practitioner, should be taken care of by the Volunteer Dentists of the Preparedness League.

The Home Service Section of the Red Cross, through their authorized agents, will investigate each case as presented and in those cases recommended for dental treatment at the hands of the Preparedness League, the patient will receive a card bearing the endorsement of the Red Cross, stating that the patient is a member of a soldier's family and worthy of free dental treatment.

In this manner much suffering can be alleviated and much dental trouble prevented among the families of the men who have gone forward to defend our country.

The medical profession is already coöperating most generously with the Home Service Section of the Red Cross and it is hoped that every member of the P. L. A. D. will share in this work.

This type of work has already been begun by a number of Preparedness League Units in various States and the pleasure and satisfaction which the members are finding in taking care of these cases warrant us in believing that it can be extended to every State in the Union.

Plans are now being formulated to take care of this new department in our activities and it is the intention of the officers of the League to have the work so arranged as to bring no special hardship on any one member.

While the Allied forces are meeting with gratifying success at the front and ultimate victory is assured, this is no time for relaxation in any of our war activities or patriotic efforts and it is only by putting every ounce of human energy into action that the result desired by all truly civilized peoples can be attained.

As a national patriotic body of professional men we are strong and well organized, but in a few States the work has developed slowly and it is urged that in such States the Directors and Officers grasp anew the great possibilities of the League's work and take up with increased determination the duties they have assumed.

Assuring you of my desire to assist and coöperate with you in every possible manner, I am,

Yours very truly,

W. D. TRACY,

Director General for the United States.

Communication from the Committee on Motor Cars for Camps.—The undersigned visited Camp Greenleaf this summer. Camp Greenleaf adjoins Fort Oglethorpe, Ga., and is some six or eight miles from Chattanooga, Tenn. Here are situated training schools for medical men,

dentists, and others. It is with the Dental Training School, of course, that we are most interested. The writer quickly discovered that the dental corps at each military camp is sadly in need of means of rapid transportation about the camp, and to the neighboring city. Military camps accommodate from 25,000 to 75,000 men. Cities of that size would have trolley cars, cabs and other means of transportation. Moreover, there would be numerous shops. At a military camp there is but one place for procuring any needed article, and all such places are widely scattered. It is manifest that an automobile would greatly add to the efficiency of the dental corps at each camp, by saving time that would otherwise be expended in walking great distances. This is so true that many officers have purchased second-hand Ford or Dodge cars, but these being private property must be maintained at the officer's individual expense. Bills for gasoline, tires, repairs, etc., etc., make large holes in an officer's pay check. This seems hardly fair.

The writer, therefore, conceived the idea that the Preparedness League should procure a car for Camp Greenleaf. On his return to New York he reported this to Director General Ash, and was surprised to learn that a visit to Camp Upton had impressed Dr. Ash with the same need, and he was just inaugurating a campaign for obtaining funds for that purpose. The writer was then appointed chairman of a committee to foster this movement. Drs. Ash and Tracy sent out a circular appeal to the dental profession in New York, and through the generous response that resulted a Dodge car has been presented to the Dental officers at Camp Upton.

The writer sent out a circular letter to one hundred men throughout the country asking for contributions to a fund to purchase a car for Camp Greenleaf. Before replies could have been expected to come in, the meeting of the American Society of Orthodontists convened in Chicago, and Dr. F. M. Casto, Secretary of that Society, and an officer in the League, suggested that an appeal be made in open meeting for contributions. This was done, with a response that redounds to the credit, loyalty, and generosity of the members of that organization, not overlooking a few guests who were present. \$1,131 was subscribed and paid in, in just 38 minutes. A Dodge Touring Car was purchased by telegraph from a firm in Chattanooga, and was promptly delivered and is in use at the camp. A quotation from a letter of thanks received from one of the dental officers, places an aspect upon this work which is important. It is as follows:

When the high officers of the camp see our car, and when the instructors in the Sanitary, Cardio-vascular, T. B., X-Ray, Orthopedic and other schools see it they know that the members of our profession are backing

us for all they are worth and that we mean business. All such things serve to drive dentistry higher and higher in the estimation of the men around us and through these things, to stimulate us, we hope, to drive so hard that some day when the old standards of dentistry emerge from the war clouds, their colors will be flying high and Uncle Sam and the whole world will turn to our profession and say, "Well done, good and faithful servants."

Future Efforts.—The League may not be able to supply cars for all the military camps, but we are undertaking to furnish cars for at least ten more. We are at the moment of preparing this for publication awaiting the decision of the authorities as to which camps are most in need, whereupon the campaign will be pushed. It may be announced, however, that as soon as these camps are selected, the State Directors will be advised and asked to coöperate in collecting funds toward the car for the nearest camp.

After paying for the two cars already purchased and delivered, we are pleased to report that we already have a goodly sum left in the treasury of this fund.

Very truly,

R. OTTOLENGUI,

Chairman, Committee on Motor Cars for Camps.

SIXTY-EIGHT VACANCIES IN THE DENTAL CORPS, THE UNITED STATES ARMY

1. The Acting Surgeon General of the Army announces that there are, at the present time, 68 vacancies in the Dental Corps, the United States Army, and that examinations for the appointment of dental surgeons will be held at various points in the United States, on Monday, November 4, 1918.

2. Application blanks and full information concerning these examinations can be procured by addressing "Surgeon General, U. S. Army, Washington, D. C."

3. The Dental Corps is a constituent part of the Medical Corps of the Army, and consists of officers in the grades of colonels, lieutenant-colonels, majors, captains and first lieutenants. Appointments therein are made at the rate of 1 for each 1,000 of the total strength of the Regular Army, authorized from time to time by law. Law requires that first lieutenants of the Dental Corps shall serve 5 years in that grade before

being promoted, but for the period of the existing emergency this provision has been suspended by Act of Congress, and after one year's service as first lieutenant, a dental surgeon is eligible for promotion to the grade of captain, after which promotions are made in order of seniority as vacancies occur in the higher grades.

4. No applicant may under existing law be commissioned in the Dental Corps unless he is between 21 and 32 years of age, a citizen of the United States, a graduate of a standard dental college, and of good moral character, nor unless he shall pass the usual physical examination required for appointment in the Medical Corps, and a professional examination which shall include tests of skill in practical dentistry and of proficiency in the usual subjects of a standard dental college course. Whether or not the applicant is married has no effect upon his eligibility for the Dental Corps.

5. Application for appointment must be made in writing to the Surgeon General of the Army, upon the prescribed blank form. All the interrogatories on the blank must be fully answered. In compliance with the instructions thereon, the application must be accompanied by testimonials, based upon personal acquaintance, from at least two reputable persons, as to the applicant's citizenship, character, and habits.

The selection of the candidates is made by the Surgeon General from the applications submitted, and a formal invitation to report for examination to the most convenient examining board in each case will be issued by him.

6. The examinations are conducted under instructions from the Surgeon General and usually last six days. No allowances can be made for the expenses of applicants undergoing examination, whether incurred in travel to and from or during their stay at the place of examination, as public funds are not available for the payment of such expenses.

Each applicant, upon presenting himself to the board, will, prior to his physical examination, be required to submit his diploma as a graduate of a standard dental college. Should he fail to do so the examination will not proceed.

7. A first lieutenant receives \$2,000 per annum; a captain \$2,400 per annum; a major \$3,000 per annum. These salaries are increased by 10 per cent. for each period of 5 years until the maximum of 40 per cent. is reached, excepting that the maximum salary of a major is \$4,000 a year, and that of a lieutenant colonel and colonel is \$375 and \$416.66 per month, respectively. In addition to their pay proper, they are furnished with a liberal allowance of quarters according to rank, either in kind, or where no suitable Government building is available, by commutation. Fuel and light therefor are also provided. When traveling on duty an

officer receives mileage for the distance traveled. On change of station he is entitled to transportation of professional books and papers and a reasonable amount of baggage at Government expense. Groceries and other articles for their own use may be purchased from the quartermaster at about wholesale cost prices. Dental Surgeons are entitled to medical attendance and hospital treatment without charge other than for subsistence.

8. Officers of the Dental Corps are entitled to the privilege of retirement after 40 years' service, or at any time for disability incurred in the line of duty. On attaining the age of 64, they are placed on the retired list by operation of law. Retired officers receive three-fourths of the pay of their rank (salary and increase) at the time of retirement.

9. In order to perfect all necessary arrangements for the examination, applications must be in the possession of the Surgeon General at least two weeks before the date of examination. Early attention is therefore enjoined upon the intending applicants.

THE DENTISTS' PREPAREDNESS LEAGUE

OUR WORK AND OBJECTS

By J. W. BEACH, BUFFALO, N. Y.

President of Preparedness League of American Dentists

MR. CHAIRMAN AND MEMBERS OF THE MICHIGAN STATE DENTAL SOCIETY:

I wish to say that I am honored—signally honored—by this opportunity to come before you and tell you of the work which, although credit for the thought has been laid at my door, I may say that it dates back beyond any conception that I had, for many were doing this work long before organized effort began; but I do feel honored in that I am privileged to assist in it. No honor is due me, I assure you, not a bit. The honor is due the fellows who go to the front and fight for us, and those are the men we are after, as well as for the general improvement and uplift of our own profession.

If you could have taken care of ten men while you cared for but six, you are forty per cent. a slacker, and we must look at it that way. It is not that we want to look at it that way, but we are forced to. You know

that we are doing this for the boys in the trenches while they are fighting for us, and they are fighting to uphold the greatest flag that waves. They are standing between us and injury. They are protecting our families, our children, and therefore those of us who stay at home; those of us, who perhaps are beyond the draft age, have no right to side-step any issue that will help our Government, whether it is through the Preparedness League or the Salvation Army, or comes from the evil one himself. We will pat him on the back if he puts forth any idea that will help us to get Kaiser Bill.

The first Dental Motor Car completed was in Washington for several days. The authorities there were much pleased with it, and it will go to France if there is any possible way of getting it there. It is now at Camp Meade, where it is being tested, and where every little weakness is going to be determined through actual service in the camp. It went to Baltimore with the Camp Meade detachment for the Liberty Loan parade there, and did active service for the detachment during that time.

The activities of the League cover several phases, and I do not want to give the impression that taking care of the selective service men is the sole object. We have a wonderful lot of work to do in all the different departments of our profession. It is like the spokes in a wheel, and it seems to me as it has developed that within a short time we would put in other spokes until the ramification reaches through the whole dental profession.

The work of making men fit is the most essential, because we must have fighters and it is the duty of every man here to try and put the man in Class B back into Class A, if we can do it dentally, because those are the fellows we need most for victory.

The sectional unit is another phase of the work. These have been formed throughout the country and have become nuclei, as it were, for the activities of the League; they have brought hundreds of young men out, as it were. Hundreds of young men who were obscure and never had a chance in the profession, have come to the front and are taking prominent places in this work. The study course, as outlined, has created a thirst for knowledge and has brought about, as you know, perhaps indirectly but in a better organized way, the formation of the courses given at the Evans Institute, the Northwestern Dental School, etc., under the supervision of the Government, and bring many men into better standing in the Army and into more responsible positions. In Kansas City, for instance, the two colleges joined and got up what they called a war faculty of twenty-five men under the Kansas City unit of the League, and gave certificates, I believe, to over sixty dentists. Over 150 took a part or nearly all of the course, and you can look Kansas City over and you will

find that many of those men who stuck by that course are to-day ranking officers in the Dental Reserve Corps, and many were put into base hospitals and other important places.

The Dental Motor Car is one of the activities which I will explain pretty thoroughly. If the Government would say to us that it would take fifty of our cars for service in France, it wouldn't be thirty days before we would have the required amount of money in the treasury in New York. We now could supply more than twenty-five by saying the word, but we are simply waiting until the Surgeon General's Department has arranged so that they can go overseas, and I do not see how they are going to keep them on this side, so we have got to wait a little; but I want to say to you, when the time comes for this movement to go forward, we want to have our own men go on those cars. For instance, when the Detroit car goes, as it surely will, have Detroit men on it. This is due us, and I know it will come about. We are going to guard very jealously the work of these units. We can use three operators at one time and a fourth one as general assistant; also a mechanician, so it is going to be a complete affair in every way.

Regarding the membership of the League, as I stated, it is an American institution, and we have got to back it up. Therefore, we must give all decent profession-loving dentists a chance to do their bit for our boys. The League has been the greatest unifying influence.

Dr. Burke spoke of the fact that we have men on all medical advisory boards. This is directly traceable to the efforts of the league, and Major Heckard has worked like a good fellow to bring this about, as other members of the organization have also. This is a big step in advance. Our members on the local boards can make assignments work and save time by taking the men from that point to the dentist direct. If you do not like the way the work of the League is going on, we are glad to have you say so. Come to us; don't tell it to some one else.

Of course, we have objectors, and I look upon the objectors with all due respect; yet every man here who has not done what he could is a slacker, but he doesn't realize it. He is really a slacker in the proportion that he drops under one hundred per cent. that he could do without injury to himself or his family. Therefore, if he is not doing his best, he is unwittingly boosting Kaiser Bill's cause, and that is the one thing we want to get away from; and remember, that when you take care of a man in your own office you put his mouth in good condition and make him dentally fit, you are getting and giving one hundred per cent. value. It is a duty and a privilege. We do not call it charity work, but are getting and receiving full value for that work, because if you give \$5.00 to some outside organization which simply raises money and lets someone

else spend it, the soldier himself is going to get a small percentage of it. But here you are giving full value, and no other body of men can do it for us. Therefore, it ought to be a great pleasure to everyone of you to think every man you fit up and send from his home town is all right to go to France, and he has gone over there to fight for you. He is one of your fighters. Just look at it in that manner and get an army of your own. You can have ten men over there fighting for you, or you can have more, and it is a lot of satisfaction to sit home and say: "I have ten fine young fellows over there fighting for me; I reclaimed those fellows." What better can a man do? I can't think of anything to make him feel more chesty than that—even going himself. So get your own army and let them go after our common enemy.

A pamphlet was circulated purporting to come from the Preparedness League, which stated that we advocated making a charge for work done for the selective service men. The Director for the State in which it was circulated asked what he should do about it. He said it created such an impression that a resolution was passed by the District and County Directors that they should charge whenever a man could pay for it. I think we have a right to put the League and its work on a plane above such things, just as President Wilson has placed the spirit of the whole war, and we know that has won more people, more nations, over to our side and view-point, than almost any fighting force could have done. That is why we should uphold this organization and keep its spirit without tarnish. If we do not we have got to fall, and when we do we are going to fall hard; it will be a boomerang to the dental profession. If you should at any time hear anything of this nature it is your duty to report it to headquarters, for all work done in the name of the League must be absolutely free.

The members of the Sub-Committee on Preparedness League of American Dentists, which is a part of the Committee on Dentistry, are Drs. Hoggan, of Richmond; Ash and Tracy, of New York; Casto, of Cleveland; Barber, of Toledo; Gallie, of Chicago; Eshleman, of Buffalo; and Beach, Chairman. Then we have Major Heckard, connecting us with the Surgeon General's Department.

Those of us who are not in the service and are beyond the draft age have a signal duty to perform in this work. Don't think because you can't get into the service that you have no duty to perform aside from caring for the selective draft men. You know the Germans are bombarding our lines every day and our boys are in hell, nothing short of it. They are being shot down and maimed, and you know in trench warfare the head and chest get more than 35 per cent. of the injuries, and thousands of those men are coming back here. The surgeons are going to take

care of as many as they can over there, but you will find some of your patients returning after an operation which has been done temporarily and he wants you to take care of him; he would rather come to you than be sent to a general surgeon; therefore, we have got to get ready to take care of our own fellows, and I believe it an imperative duty for us to organize study groups, study courses and clinics on that basis. This will assist in bringing the work into the colleges and establishing more elaborate and definite courses, and create a desire and a demand for them.

Now, the matter of financing is something you would like to hear about. We have discussed this question in various ways. One way is by contributions received from patients; and still another is perhaps by aid of ladies' auxiliaries as they did in Cleveland. They gave a dance and raised over \$400, and at another they raised \$70. The ladies also did a lot of work for the dental reserves who went away; they made a little case for each of them, a sort of comfort case, I guess they call it. As I said, there are different means for financing which can be used, according to the locality and the requirements. Several states have made appropriations, particularly Rhode Island and Massachusetts.

We have 25 sets of slides which have just been completed for distribution to the states of the Union, as far as they will go. Dr. Burke will have a set, and you can call upon him for them to use at any of your meetings. These slides will, no doubt, be interesting to the laity as well as to the profession. There will be a short synopsis lecture which you can color up locally and put in anything you like. These are for the work of the League. They are given to the State Directors, and I want you to make full use of them; and kindly remember this, every new member you get for the League helps our cause in every way, so when making these remarks try and stick a pin in the membership proposition and help us all you can. I thank you very much for your attention.—*Michigan Dental Journal*.

A GOOD THOUGHT

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.—BACON'S "Maxims of the Law."



DENTAL ECONOMICS

STEPS TO VICTORY

THE GOAL

The muscle and money that turn the wheels of industry, that support the soldiers, and that will bring victory in the end, must come from the great mass of the people. The United States is rich in resources. It is rich in man-power. It is richest of all in the spirit of its people. The people of the United States are awakening to their own great capabilities. Shown the need for supporting the war even beyond what they have already done, there can be no question of the response of the whole population.

To-day the eyes of all mankind are directed upon us, "the eyes of the earth," as one of our statesmen has expressed it, "with hope and expectancy, the eyes of the military autocracy of Germany with outward contempt but inward fear."

Therefore, while carrying the nation's war business at the highest possible speed, can there be any reason why we should not reduce our expenditure for things that do not promote efficiency in mind or body, and turn what we save into the Government purse? The man who believes in his country and in himself will find no hesitancy in making his reply.

Economy must be general, and all must save for victory as one man. All must work with a single object in view; the object of manifesting complete loyalty to and support of a noble cause. There is no one so poor that he cannot do his part. Thrift is called the foundation of the power of nations; as such it is absolutely vital to the welfare of the American people.

We must be ungrudging in what we do, for if our most bitter war experiences are still to come, only thus shall we have prepared for them. It is a keen incentive we have for economy, for saving and for work.

We are pledged to keep this incentive constantly before us, to hold ourselves steadfastly to it. *It is the incentive to win the war.—The Mechanics and Metals National Bank of the City of New York.*

OUTLINE OF WAR SAVINGS SOCIETIES—WHAT THEY ARE AND HOW THEY SHOULD BE FORMED

Some of the trade committees fail to appreciate the importance of forming War Savings Societies in the firms in their division, and have also failed to understand the method of organizing these groups of savers in their trade.

Through the War Savings plan presented by the Treasury Department, a great opportunity is offered the firms in every division to group themselves into teams of savers, thrift clubs or societies, and thus be of immediate and direct service to the Government.

By releasing the money formerly spent for non-essentials and loaning it to the Government, the thrifty will be saving labor and material so necessary for our war industries.

The fighter is one with his company. He doubles his fighting strength and spirit by pooling it with that of every other soldier in the fighting unit.

A single thrift stamp buyer is like a soldier fighting alone—his saving looks too small to count. But when your crowd counts up their investment in War Savings Stamps, you will find out that you are truly and definitely helping to win the war. The few dollars carelessly spent seem like a trifle in comparison with the billions spent on the war, and one does not think it really matters.

Twenty members of a War Savings Society, each buying one War Savings Stamp per month for twelve months, can equip fifty men with rifles.

One hundred and twelve members, each buying one Thrift Stamp every week, can supply the food for ten men continuously.

Jones, by himself, may have some doubts about brushing up his last year's suit or he may think the crowd will think him a piker if he isn't a good spender. But Jones, as a member of a War Winning Thrift Club, will find it bad form, to say the least, to be extravagant or careless. The War Savings Society can set a new standard which makes it good form to show evidence of making what you have do a little while longer.

New York to date is way behind its quota, having sold less than one-fourth of its allotment of one hundred million dollars. The trades are the backbone of the War Savings campaign. Quite a few of the divisions have gone "over the top" by organizing one hundred per cent. War Savings Societies in every firm in their trade. The organization of War Savings Societies automatically increases the weekly sales of stamps in the divisions, and frequently increases them enough to sell the entire

quota. War Savings Societies and Thrift Clubs have been successfully organized as follows:

A secretary or captain is appointed. Then the secretary or captain secures signed pledges from ten or more individuals whom he desires to have in his society or team—on form 89 (Exhibit A). (This form supplements 418, which was used during the June drive.)

The secretary then reports the formation of the society, the number of members, the name of the secretary or captain, address, etc., to War Savings Headquarters on form 423 (Exhibit B). Upon receipt of this information, the War Savings Society certificate of affiliation with the National War Savings Committee will be immediately forwarded to the Secretary of the Society and the Trade Chairman notified of the formation, etc.

From time to time the secretary will report the total of sales through his society on form known as 366a (Exhibit C). This report will be made by the secretary to the chairman of his division, or if it so happens that the society does not fall within any trade grouping the report will be made direct to the headquarters of the War Savings Committee, at 51 Chambers Street, New York City.

Waste and extravagance are Germany's silent allies. Every bit of waste from needless expenditure takes force from the driving power that America must put in to win the war.

You read daily in the papers of the urgency for speeding up our program of production on an unheard-of scale; of a million or more new soldiers to be equipped and of a great cry from our Allies to come quickly to their aid.

Does any one believe that this vast enterprise that we have entered into can succeed when we spend and waste as in time of peace?

Organize groups of savers in the firms in your division to pledge themselves to save food, to save fuel and save money, and to purchase Government securities with their savings. Every dollar saved for food, fuel and needless extravagance releases its equivalent in man power and material for our Army and Navy and for the forces of our Allies, at the same time inculcating the spirit of thrift in the American people.

We know that you will do everything in your power to organize these groups of savers in accordance with President Wilson's request, thereby assuring the success of the War Savings campaign and the floating of future Liberty Loan issues.



WAR PROFITS TAX AND EXCESS PROFITS TAX—THE DIFFERENCE

"By a war-profits tax we mean a tax upon profits in excess of those realized before the war.

"By an excess-profits tax we mean a tax upon profits in excess of a given return upon capital.

"The theory of a war-profits tax is to tax profits due to the war.

"The theory of an excess-profits tax is to tax profits over and above a given return on capital. The excess-profits tax falls less heavily on big business than on small business, because big business is generally overcapitalized and small businesses are often under-capitalized.

"The war-profits tax would tax all war profits at one high rate; the excess-profits tax does and for safety must tax all excess profits at lower and graduated rates."

The above extract from Secretary of the Treasury McAdoo's testimony before the House Ways and Means Committee gives his differentiation between war-profits and excess-profits taxes and explains his position in urging upon Congress an excess-profits tax with an alternative war-profits tax in the forthcoming revenue legislation.

To the average citizen Secretary McAdoo's position seems well taken. Most small and local corporations are capitalized at an actual valuation. Many of the very large corporations are greatly overcapitalized; the stock of some of them has been repeatedly watered. With only an excess-profits tax a corporation earning 10 per cent. on grossly watered capital will pay the same tax as another corporation not overcapitalized earning 10 per cent. on the real, actual valuation of the money and property invested in its business. The profits of the first corporation might be 30 per cent. on its actual valuation, and it is to cover such cases that a war-profits tax is urged.

As many of these large corporations are engaged in Government work and drawing huge sums from the United States, it seems particularly just that they should pay taxes on the same actual basis as corporations not over-capitalized. A tax that taxes equally a 10 per cent. profit on watered capital and a 10 per cent. profit on unwatered capital is not equal and uniform and scarcely just.

A LITANY FOR DENTISTS

H. R. R.

Help us to be patient, Oh Lord—

With hysterical women, and women who want to tell the sad story of their life; with men who believe women stand pain better than men,

and business men who want us to hurry; with the person whose teeth all have three roots, and whose grandfather had a third set of teeth; with those whose teeth pull harder than anybody's else, and who can't stand cocain; with those who tell stories of dentists breaking people's jaws, and are otherwise afflicted with Gabborrhea; with people who never paid more than five dollars for a crown before, and never had to come back the second time to get it; with those whose former dentist did not hurt them, and those who can't stand the buzz of the drill; with women who want us to make love to them during office hours, and women who make love to us during office hours; with mammas with sons, and papas with daughters; with office girls who are one-fingered stenographers, and who pout; with dentists who are satisfied with their canal work, and don't believe in X-ray pictures; with other dentists who need dental work and want to pay for it (?); with dentists who cure all diseases by extracting teeth, and other dentists who don't believe any of this bunk about blind abscesses causing disease; with patent medicine dentifrices all but guaranteed to positively prevent decay and pyorrhea; with mysterious mixtures to cure abscesses, and hocus-pocus pills for pyorrhea; with a physician's description of pyorrhea; with practice-building polishing powders which double one's income; with harmless X-ray machines and gas machines which fairly operate themselves; with salesmen who won't believe us when we tell them we do not want what they have to sell; with people who want only a moment of your time, and take a half hour; with insurance agents, automobile salesmen, promoters, and missionaries; and with those who write litanies—

Oh Lord, help us to be patient.—*Oral Hygiene.*

NEW RUBBER SUPPLIES

The employment of rubber in consequence of the development of technical industries, especially electro-technique and vehicular-technique (bicycles, motor-cars), has increased to such an extent that the supply of tropical rubber forests will not be sufficient for long. The region of the Republic of Liberia in West Africa is said to be capable, according to information by the African traveler, Sir Harry H. Johnston, of furnishing an almost unlimited supply of rubber. This news is astonishing, because Liberia has so far exported scarcely any rubber. Johnston has stated that in Liberia there is present an immeasurable mass of rubber, and further has told us that within the next six years we shall have at our disposal in Liberia $2\frac{1}{2}$ millions of cultivated rubber trees capable of supplying

African rubber of excellent quality. According to other information there are at least 20,000 English square miles—in round numbers, 50,000 square kilometres—of the area of Liberia covered with dense rubber forests. It is furthermore mentioned that in Liberia there are several rubber-like climbing plants which hitherto have been unknown to science.—*Ash's Journal*.

WHAT YOUR SUBSCRIPTION MEANS

When you subscribe to a Liberty Loan you subscribe to the sentiment that the world must be made safe for democracy and subscribe to the fund that is to make the world safe for democracy.

You subscribe to the belief that innocent women and children on unarmed ships shall not be sent to the bottom of the sea; that women and children and old men shall not be ravished and tortured and murdered under the plea of military necessity; that nurses shall not be shot for deeds of mercy, nor hospital ships be sunk without warning, or hospitals and unfortified cities be bombed or cannonaded with long-range guns.

You subscribe to the doctrine that small nations have the same rights as great and powerful ones; that might is not right, and that Germany shall not force upon the world the dominion of her military masters.

You subscribe, when you subscribe to a Liberty Loan, to the belief that America entered this war for a just and noble cause; that our soldiers in France and our sailors on the sea are fighting for right and justice.

And you subscribe to the American sentiment that they must and shall be powerful, efficient, and victorious.

PRINCIPLES

Principles are the deep laws underlying life.

Just as gravitation runs through every particle of matter from sun to sand grain, just as electricity pervades all things and chemical affinity works always and everywhere, so there are certain laws that eternally operate in events and in men's minds.

That honesty is the best policy, that courage is power, that practice brings efficiency, and that truth eventually prevails over error, are just as ever green and exceptionless as the forces in dead stones and planets.—

DR. FRANK CRANE.

DIETETICS AND HEALTH

ACID FRUITS WILL CURE YOUR "ACIDITY"

Most fruits are rich in potassium salts, and calcium salts, which are united with the tartaric, citric, and malic acids that produce the agreeable acid flavors of the fruit. These feeble acids are quickly burned up or oxidized in the body into alkaline carbonates.

Oranges are base-forming, as are the juices of all other fruits. In fact the most important value of fruits consists in their alkaline mineral salts and feeble fruit acids.

It has been demonstrated on hundreds of occasions that these fruit acids exercise a wonderfully benevolent action upon the blood and kidneys.

In such violent diseases as scurvy, beriberi, anemia, neuritis, acidosis and other morbid conditions in which the tissues are bathed in acid secretion instead of alkaline secretions the alkaline minerals of fresh fruits prove invariably of great benefit.

The lemon, the orange and the grape are invaluable in such disorders.

The peculiarly pleasing fruity odor of ripe fruits is due to the presence of ethereal bodies which completely elude chemical investigation. Nobody knows just what they are, and it is doubtful whether anybody ever will know.

Artificial fruit flavors are made in the laboratory from coal tar, ethers, esters and aldehydes, which grossly resemble the odor and flavor of certain fresh fruits such as the peach, the banana, the pineapple, the strawberry, and the apple. They not only have no nutritive value but in many instances are actually dangerous because they are used to disguise otherwise inadequate foods in order to make them more pleasing to the palate.

Such foods never fool the stomach, yet where there is controversy between eminent scientists in the employ of commercial institutions, and apparent conflict between the methods adopted by the Almighty and the theories advocated by certain professors, the individual possessed of a little reverence for the things that God has wrought and a little common

sense with respect to his own body will decide against the professor in favor of God. Commercial laboratories and commercial chemists have only too often received fat fees for declaring these substances to be "perfectly harmless."

It is now a well-established fact that the abstraction of calcium salts from the tissues through the consumption of refined foods from which the calcium has been removed, prepares the tissues as fertile fields for the growth and development of the germ of tuberculosis.

Nature's method of curing tuberculosis consists of calcification of the tuberculous area. By calcification the tubercles are walled up and shut off from the rest of the body. Nature can accomplish this work of self-protection only when calcium is available.

In a modified but none the less serious form our American school children, particularly the children of the poorer classes, are robbed of the elements of a base forming diet through refined food industries, white flour manufacturers, corn-meal millers, polished rice mills, candy factories, and ignorant methods of cooking at home.

In their limited selection of foods all the following refined, demineralized or acidosis-producing products are found: Beef, pork, lamb, liver, ham, white bread, soda crackers, wafers, biscuits, doughnuts, buns, rolls, pie crust, lard, lard compound, cake, corn flakes, corn-meal, farina, tapioca, polished rice, corn starch, sugar, glucose, syrups, cheap jams and jellies, penny candies, etc.

More through lucky accident than design and largely attributable to the greater variety of foodstuffs at their disposal the children of the well-to-do consume many offsetting foods which prevent exaggerated forms of acidosis, but which are nevertheless sufficiently inadequate to prevent its milder forms, that not only interfere with normal development, but which predispose to preventable diseases of many kinds.

Among these milder forms defective teeth constitute the most conspicuous symptoms. Defective teeth are invariably accompanied by other systemic ravages more or less commensurate with the extent to which the base-forming elements are deficient.

By bolting, sifting, screening, degerminating, denuding and refining cereal foods these base-forming elements are rejected in the food factory. By boiling vegetables and pouring down the waste pipe the water in which they are boiled, the housewife rejects them at home.

The chief base-forming foods are oranges, lemons and ripe fruits of all kinds, the outer grains, such as whole wheat, whole corn, natural brown rice, whole rye, greens of all kinds, such as lettuce, beet tops, celery, spinach, cabbage, onions, cauliflower, asparagus, etc., the roots of tubers, such as potatoes, carrots, parsnips, turnips, beets, beans, peas, lentils,

nuts of every kind and unsulphured dried fruits, such as prunes, black raisins and currants.

Egg albumen or egg white, like meat, is acid-forming.

Egg yolks are base-forming.

Milk is physiologically balanced, containing natural proportions of base-forming and acid-forming substances.

In accordance with their custom or ability to obtain eggs, milk, fruits and vegetables properly cooked, the children of the poor are saved from the extreme acidosis which kills quickly.

There are so many thousands who suffer from malnutrition without knowing it, from anemia, from impaired vitality, from lowered resistance to disease, from "laziness," and from other serious departures from normal physical stamina that end in future misery, impaired efficiency and untimely death, that it is time indeed the public understood the relationship between base-forming and acid-forming foods.

Men who are not fed properly cannot yield productive energies. Sick men or dead men cannot build or dig. Soldiers improperly fed cannot long endure under the terrific strain to which they are subjected.

With respect to his food man has ever been a contradiction and a fool. The fixed laws which control the processes of nutrition are so simple, so obvious and so actually luminous that a child of twelve can grasp them.

Man alone is the only animal that ignores them. The Great White Plague and many of the other ills directly traceable to inadequate food, through the use of which the human body is deprived of the elements necessary to maintain its integrity, could be banished from the human race if the human race would only apply to its dietary the fixed laws which control the resistance of the sheep and horse to the same disease, and the disregard of which makes the hog and the cow a constant prey to it.

Gluten meal, brewers' grain, distillery waste and refined beet pulp are acid-forming by-products on which the cow is only too often overfed, and under the influence of which, with a deficiency of other proper foods, she becomes the natural victim of bovine tuberculosis.—ALFRED W. McCANN in *Physical Culture*.

BARLEY AS A WAR TIME SUBSTITUTE FOR WHEAT

When the United States Food Administration issued its appeal to this nation to "save the wheat," the advice was simultaneously given to make liberal use of substitutive cereals which may be available in greater abundance or lend themselves less readily to use overseas. Corn, rice, oats, rye and barley at once assumed a new prominence as "breadstuffs"

for people little accustomed to consume them in such liberal portions as the new regimen seemed to demand. The belief, deeply ingrained in many persons, that wheat is an essential of good nutrition, has largely if not entirely been dispelled alike by the assurances of our foremost students of nutrition, and by the experience of a population that has voluntarily reduced its use of wheat so as to release more than 120,000,000 bushels for shipment to Europe in less than a year. If we are ready to admit that wheat is not indispensable, there may still remain some concern regarding the nutritive virtues of the substitutive cereals. Polished rice has come into bad repute, perhaps unjustly or at least unnecessarily, because it is so milled as to lose its natural content of antineuritic vitamin. However dangerous the use of a diet deficient in vitamins may be, it should always be borne in mind in discussions of the milling question that, as a rule, man does not live by polished rice alone; nor does our population subsist on wheat or any other cereal to the practical exclusion of all other vitamin-bearing foods. This being the case, the problem of the wheat substitutes is narrowed to the question, not of their perfection as the bearers of all nutrient virtues, but rather of their relative value in comparison with wheat as a part of a mixed diet. In this respect the liberal use of corn (maize) has already well justified itself. A recent study of the dietary qualities of barley by Steenbock, Kent, and Gross at the University of Wisconsin justifies the assertion that this cereal does not differ essentially in its nutritive qualities from maize, oats or wheat—a statement which “may serve to allay the fears of those dietitians concerned over the use of barley as a wheat substitute.” Like the other cereals, barley alone is unable to meet the demands of nutrition satisfactorily. By supplementing it with suitable protein, fat-soluble vitamin, such as butter or cream or milk affords, and with those inorganic elements in which the cereals are singularly deficient, one can prepare an excellent food mixture. This is precisely what is accomplished, in the usual order of culinary events, when our breadstuffs are cooked and served with milk, meats, eggs and green vegetables. There appears to be no reason for according to barley anything but a welcome on its return to the fold of human foods. Though it is inferior to wheat and rye from the technical standpoint of the baker of the loaf, barley is acceptable to the physiologist even without its conversion into “liquid bread,” the catchword so often cited to justify the use of beer.—*Journal A. M. Association.*



DO YOU KNOW? ASKS THE DOCTOR

Do you know that warm air can be as pure as cold?

Do you know that a window open an inch, with the wind blowing thirty miles an hour and with the outdoor temperature 20 or 30 degrees F. below the initial indoor temperature, will renew the air in a bedroom more quickly than a wide open window on a hot, still summer night?

Do you know that a sleeping porch or veranda, inclosed in winter and provided with a gas stove, may contain more impure air than a well heated and ventilated living room?

Do you know that the average healthy physician, compelled to sleep on a cot in a tent during a snow or rain storm, will forget all about the pneumococcus and insist that he is going to have pneumonia?

Do you know that about all the positive advice we can give to prevent the development of cancer is. 1. Do not keep picking at a wart or mole but have it removed; 2, do not allow any source of continually repeated mechanical irritation to remain; 3, do not take up X-ray or radium work; 4, do not live more than forty years?

Do you know that the rural death-rate is higher and the rural birth-rate lower than the urban, at least for New York State?

Do you know that a law closing all public restaurants would compel every man to set up housekeeping or starve?—DR. A. L. BENEDICT in *N. Y. Medical Journal*.

THE DOCTOR PRESCRIBES A RARE SUBSTANCE

The great State of Texas will seemingly be justified in boasting that it is the first state, province or kingdom to have wheat prescribed by doctor to patient. For several months Texas has voluntarily foregone the use of wheat flour, and a physician having a patient suffering from pernicious anaemia wrote out a prescription calling for 12 pounds of wheat flour, which 12 pounds were duly doled out by the Food Administration at Dallas.

AND SILENTLY STEAL AWAY

Maybe ants don't like dentists and never go near them. But if they do happen to take a look-in at your premises and you feel indignant about it and wish to get rid of them, follow the advice of *Healthy Home* as follows:

Common fine salt put at the places where the ants enter and where they have to go through it, will drive them away, and will do no harm to anybody or anything. Use it liberally.

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay Hints, Questions, and Answers, should be sent direct to him.

A FEW SUGGESTIONS FOR RENDERING DENTAL OPERATIONS LESS PAINFUL

1. Use sharp instruments.
2. Decide how much is to be cut away and do so promptly with as few strokes and as little friction as possible.
3. Obtunding effect of hot water: Have your assistant keep a constant stream of water (as hot as can be used without danger of scalding) flowing upon the tooth being ground.
4. Chloroform analgesia produced by permitting patient to inhale chloroform fumes from a wide mouthed bottle. They get sufficient air with the vapor to remove the element of danger; and yet in a few minutes most satisfactory analgesia may be obtained and maintained as long as desired. Let the patient hold the bottle and administer the anaesthetic to himself as sensation begins to return.
5. High-Pressure Anaesthesia: Drive a number five bur hole into sound dentine, preferably in a line directly toward the pulp. Now take a plugging instrument that is parallel sided at the end, and of a diameter to fit snugly the number five bur hole, attach with heat a small section (one-sixteenth of an inch or less) of a pink base plate canal point about same diameter as plugger. Lay this on your cabinet to cool and harden, while you moisten your bur hole with a little cocain solution. I use saturate solution of cocain crystals in adrenalin chloride. Now pass just the tip of the gutta percha point through the flame, and apply same to moistened bur hole with a firm piston pressure and hold for some seconds. This will usually not have to be repeated more than once or twice with a little deepening of the bur hole each time, to obtund the most sensitive tooth. And if the pressure is made upon sound dentine and under aseptic conditions, thus avoiding the carrying of infection into the pulp by the pressure, I have yet to learn of a single case where harm has resulted

from this anaesthetization. These are only a few suggestions to start the ball rolling; there are numerous methods employed by various men with satisfactory results in relieving the patient of the bugbear of pain, which is almost a necessity in the modern practice of dentistry. Let us exchange opinions and methods here frankly and freely on this most important subject.—V. C. S.

I have become convinced recently that certain agents and drugs have a great many more uses in dentistry than some of us have any idea of, e. g., Trichloracetic acid: I will give a few uses of this drug that happen to be in my mind, and I trust other men will generously contribute the results of their experience until we can publish in "Practical Hints" a complete list of the uses of trichloracetic acid in dentistry. It is a more powerful antiseptic than carbolic acid, yet like phenol is a self-limiting coagulant escharotic.

1. It is useful in full strength saturate solution to eat away painlessly hypertrophied gum or pulp tissues or infected gum flaps over third molars. It requires several applications at subsequent sittings for it to remove any considerable bulk of tissue, however, for as stated above it is self-limiting in its penetrability. Sometimes a small crystal can be placed under a third molar gum flap and left there to dissolve slowly, and thus more effectively remove tissue.

2. The saturate solution seems to be almost a specific for cancer sore.

3. A 15 per cent. solution is very beneficial to swab the gums with in cases of ulcerative gingivitis.

4. A 50 per cent. solution to stop the weeping of the gum tissue at a cavity margin when drying out for insertion of filling.—V. C. S.

August 3, 1918.

Editor DENTAL DIGEST:

You will perhaps remember that in March DIGEST you published my description of a small motor attached to my old foot engine.

I have had twenty-two enquiries concerning the motor, and for information as to the method of attaching the motor to the old engine.

For each one I received I wrote a full description, and was very glad to do so, as I think it is a great little thing, and I expect some of them have fixed their foot engines and are now running them with the little motor.

I wish there had been as many letters from the boys asking about the System of Accounting that was printed in a previous number I sent in to the DIGEST, for I think it is the best and most comprehensive way of keeping a dentist's accounts. Simple, and yet telling at the end of the year all the dentist wishes to know about his business. It is so simple and cheap that the average dentist would probably turn it down on that account.—J. A. ROBINSON.

Editor DENTAL DIGEST:

Herewith a remedy for the erroneous preparation of shoulder for Porcelain Jacket Crown.

Most important technique in construction of the Porcelain Jacket Crown is to obtain a perfect adaptation of porcelain at the gingival margin, and as predecessors mention, proper depth of the shoulder is about $\frac{1}{2}$ millimeter. Unless this is correctly followed, it is almost impossible to control the contraction of porcelain during the baking process; no matter how carefully the shoulder is overlapped, or how often the porcelain body is cleared at the margin during biscuiting, in final fusing it will draw away more or less from platinum or draw the platinum with it, thus interfering with fit of crown.

However, in preparing porcelain jacket crown, we often encounter teeth which have shallow cavities involving two or more surfaces along the gingival margin; to restore this condition, sometimes it is very likely that the slight undercut to retain the filling material may endanger the vitality of the pulp, and such cavities may conveniently be ground off without fear, but the shoulder becomes deeper than should be. Again in dead teeth the dentin is rather soft and irregular in density, slight unsteadiness of hand or right angle hand piece may cause unexpected concavity, and the result is a somewhat uneven and undesirable depth in shoulder.

To modify above condition, after making cement cone as usual, restore the cone with Kerr's Modeling Compound to desired shape, making even depth in shoulder and leaving upper third or half untouched as case may be, which together with gingival curvature will serve as key to the proper position when case is finished. Platinum can be burnished over as usual; this minimizes the acute angle of the deep shoulder and prevents breaking and wrinkling of platinum.

This may not be new but may help the beginner.

Y. HAYASHI, D.D.S.

Editor DENTAL DIGEST:

Patient, a man about twenty years of age, complained of violent pain in lower first molar. Examination showed it to be in good condition—apparently, upper third molar on same side was badly broken down but patient insisted that the trouble could not possibly be there. I had removed the nerve from lower right first molar about twelve months before but to satisfy the patient, I opened it and found it in good condition. This puzzled him a little so he insisted that I remove the nerve from the second bicuspid as he was sure that the trouble was right in that locality. This I did. When that gave no relief, he was more puzzled than ever so he told me I might remove the upper third molar if I thought it was causing the trouble. This I did and relief was immediate.—T. J. FORD, Searcy, Ark.

Editor DENTAL DIGEST:

With regard to Dr. Wilds' case, DENTAL DIGEST for August, in which a filling of cigarette tinfoil has been inserted in a mesio occlusal cavity in one of the upper molars by the patient, without the assistance of a dentist, allow me to say that this tinfoil, taken from the cigarette package, was probably not pure tin at all, but lead with a tin coating. The action of the two metals may have had a preservative effect upon the tooth with a better result than either metal would have done if it had been used alone. The case is certainly an interesting one.

DR. S.

QUESTIONS AND ANSWERS*Editor DENTAL DIGEST:*

I wonder if you can enlighten me a little on the following case. Last February, I set a bridge for a gentleman from right cuspid to second molar, both abutments being shell crowns.

About three months after, he came in with labial surface of cuspid crown discolored about half way up from tip. It polished off very easily, but has come back again twice, and has the appearance of oxidized steel. This discoloration only comes on this one tooth, and only about half of labial surface.

He has several other gold crowns which do not discolor at all. Can you explain the cause of this? Thanking you for any suggestion regarding same, I am

Very truly yours,

J. M. SOMERS.

Editor DENTAL DIGEST:

Can you tell me anything good to take silver nitrate stains out of linen?

Thanking you, I remain,

Yours respectfully,

FLORENCE KELLY.

ANSWER.—Try iodine followed by ammonia.—V. C. S.

August 19, 1918.

Editor DENTAL DIGEST:

Kindly answer in "Practical Hints" of the DENTAL DIGEST the following:

1. How do you get an impression of the tooth with the cavity, with an impression thimble, when either of the contacts is tight?
2. If you use a piece of metal in the approximal space in order to confine your compound in a M. O. or D. O. cavity, how would you build your metal die over it?

To make the above more explicit, I shall describe the case at hand: I want to construct a bridge with inlay abutments without destroying the pulp, using pins in suitable places for additional strength. I have tried Burgess method as described in the *Cosmos*, but failed, due to my inability to manipulate as thin a matrix as he advised. I want, therefore, to make a heavier matrix in a die.

Hoping that I have conveyed my wish properly, I thank you in advance.

H. KRAMER.

ANSWER.—Perhaps some of our readers more familiar with the indirect method than I am, can answer this question as you wish it answered. Personally, I believe that the result in final fitting of your inlay can be more satisfactorily secured by making your wax pattern directly from the tooth in the mouth. When you have secured a satisfactory wax pattern with pins in place and all, it should be invested immediately to avoid the natural warpage that will always take place where wax has been worked, pressed, manipulated into a certain form, then allowed to stand and to be subjected to changes in temperature. Wax is an elastic substance and has the same tendency to return to form that rubber has, though of course in decidedly less degree. Thus to avoid the necessity of the compound impression, amalgam die and swedging process, the wax model must be carefully made and then carried on to the finished casting as quickly as possible.—V. C. S.

CORRESPONDENCE

Editor DENTAL DIGEST:

I would like to reply to the communication of "R. X. McD." in the August number of DENTAL DIGEST, which reply was a criticism of a letter by Mrs. B. R. D.

In this case I am the "man behind the chair," I presume he means. It seems he missed the thought her letter was intended to point out. It was intended to bring out the value of coöperation, or, as it is sometimes expressed, "Unionism." I know of no trade or profession at the present time that does not take advantage of coöperation except the ministry. I believe one of the reasons why dentists have not generally fixed upon some definite scheme or basis for fees, seldom, if ever (do the critics who consider themselves as occupying the high places) mention any definite figure.

In the instance quoted, a lady whom I had never seen before, asked me if there was any charge for a service rendered. Is that my fault? Perhaps she may have come direct from the office of "R. X. McD."

He says the man makes the business. I understand from this that he ignores competition.

I also surmise that he works for real money. I assume that money seems worth while to him. If I have guessed correctly so far would "R. X. McD." please inform me why he does not charge fees ten times what he now charges, no matter what his present fees may be? In this case it seems the only limit would be the sky.

If purchasing a new 12 cylinder car of standard make would "R. X. McD." pay the standard price or a few thousand more because the salesman requested it? In all other lines of activity there is a definite price for a definite service which is readjusted as conditions require.

After a careful analysis I can find nothing at all in the reply of "R. X. McD." that contributes in any way, either to the advancement of dentistry or of dentists. What dentists are most in need of at the present time is kind and instructive talks or essays by men in the profession who have proved their worth.

J. B. D.



FATE

Two shall be born the whole wide world apart,
 And speak in different tongues, and have no thought
 Each of the other's being; and have no heed;
 And these o'er unknown seas to unknown lands
 Shall cross, escaping wreck; defying death;
 And all unconsciously, shape every act to this one end
 That, one day, out of darkness, they shall meet
 And read life's meaning in each other's eyes.

And two shall walk some narrow way of life
 So nearly side by side that, should one turn
 Ever so little space to right or left,
 They needs must stand acknowledged face to face.
 And yet, with wistful eyes that never meet,
 With groping hands that never clasp; and lips
 Calling in vain to ears that never hear;
 They seek each other all their weary days
 And die unsatisfied—and that is FATE.

EXTRACTIONS

"I hate dentists."—The German Crown Prince.

"Reciprocity."—The dentists and then some!

Occasionally a very truthful man goes fishing.

Early to bed and early to rise,
 And you'll meet none of the regular guys.

When poverty comes in at the door love makes a
 noise like a flying machine.

Would you call eating lobster and ice cream
 putting down a disturbance?

A dentist says that teeth are like verbs—regular,
 irregular, and defective.

War bread must make the baker feel like a
 butterfly, flitting from flour to flour.

A woman says that tight shoes are comfortable
 because they make her forget her other troubles.

Congressman—The chauffeur doesn't show me
 proper respect.

Wife—You must remember that he has driven
 for Bob Fitzsimmons and Gunboat Smith.

Mrs. Enpeck (in husband's office)—That new
 typist is a peach.

Enpeck (astonished)—Why—e-er—what makes
 you think so, my dear?

Mrs. Enpeck—She's going to be canned.

"What is literature?" said the person who tries
 to start arguments.

"Literature," answered the man at the type-
 writer, "is something to put around advertisements
 so that they can be more effectively displayed."

Boston Mother—Our child is very backward in
 his learning. Four years old and yet takes no in-
 terest in Shakespeare.

Visitor—That does not indicate that he is back-
 ward. He may believe that Bacon wrote the
 plays.

Decorator (apologizing)—"I'm very sorry, mum,
 I 'aven't been able to paper your two top rooms.
 They took away my last man a week ago for the
 army. Seems to me they think more of this 'ere
 bloomin' war than they do of paper 'anging."

"My work," remarked the dentist, "is so pain-
 less that my patients, often fall asleep in the chair
 while I am operating."

"Hm! That's nothing!" retorted his rival.
 "My patients nearly all insist on having their pic-
 tures taken while I am at work, in order to catch
 the expression of delight on their faces."

A woman lost her little curly poodle and called
 on the police to find it. The next day one of the
 force came with the dog, very wet and dirty. The
 lady was overjoyed and asked a number of silly
 questions, among others:

"Where did you find my dear darling?"

"Why, ma'am," said the officer, "a fellow had
 him on a pole and was washing windows with him."

Sufferer—I have a terrible toothache and want
 something to cure it.

Friend—Now, you don't need any medicine. I
 had toothache yesterday and I went home and my
 loving wife kissed me and so consoled me that the
 pain soon passed away. Why don't you try the
 same?

Sufferer—I think I will. Is your wife at home
 now?

THE BEST OF CURRENT THOUGHT

[*Dental Cosmos*, September, 1918]

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GO TO THE BOOKS

BY HARRY F. LOTZ, D.D.S., JOLIET, ILL.

Students of dentistry, who were in Philadelphia prior to the year 1895, will recognize in the title of my paper a favorite saying of a teacher of dentistry, who did much to mould the lives of those who came within the circle of his influence.

Dr. James E. Garretson, whom I have quoted, was fond of insisting that every student should own at least five books—Gray's Anatomy, U. S. Dispensatory, Brown's Grammar of English Grammars, Burton's Anatomy of Melancholia, a medical dictionary—and with Garretson's System of Oral Surgery, a student was equipped to go on with his dental studies.

If you do not *know*, "Go to the Books" is as true to-day as it was in Doctor Garretson's time, and the continually going to the books day after day by a student with a receptive, retentive mind will recompense the individual for the time and work spent in following this advice of the Father of Oral Surgery.

A member of the Will-Grundy County Dental Society received his commission on Friday, with instructions to report the following Monday at Camp Pike, Little Rock, Ark. The writer had the pleasure of being with this fellow worker when he turned the key in his office door, perhaps for the last time, and I wish you all to know that the only things he carried out of his office were his dental books, saying, "I will need them in camp." Do you think our soldier boys are safe in the hands of this Lieutenant? I do.

One of the most wonderful things about this war is the fact that it is stirring people to think, and to think hard, about all sorts of questions. Such mental exercise has not been indulged in by the human race in generations.

Beyond the shadow of a doubt the men who do big things differ from those who don't chiefly in the activity of their minds. The big doers keep up a continual mental struggle, collecting and absorbing new facts, studying to understand them, trying to put two and two together—until out of this activity they hit upon good practical ideas which they see clearly. No mentally lazy man ever had a really good idea. Good ideas are born in brains that keep working.

Editorially the *Cosmos* of May, 1918, page 444, says:

"The world is being remade. New social conditions are being created, and when the period of reconstruction and reorganization succeeds the

present agony of conflict and slaughter, the signs of the times all point to the establishment of new ideals of altruism as the dominant feature of the world's social organization. Good judgment and wisdom dictate that dentistry should now begin to shape its activities so that they will be in harmony with the new order."

A million young men called from their present occupations are an army of students, for in every branch of the service, intense instruction and study is required of our soldiers. The National Educational Association meeting at Atlantic City this spring will tell us that there are 700,000 men in the draft unable to read or write. Instruction is being provided for these men, earnest study is being carried on by thousands of men in our army camps; students are being made in great numbers; our young men will be coming back imbued with the desire for book learning.

General Pershing asks for fifty tons of books—all kinds of books—from tales of adventure to encyclopaedias. There has been great demand for industrial text-books as well as standard fiction, and the Library War Service of the American Library Association which is furnishing books to men in military service, both in this country and abroad, has many requests constantly for books.

The men want the books for recreation and study and the association has found that they are eager to read, and in every camp from eight to twenty branch libraries are maintained in Y. M. C. A., K. of C. and Y. W. C. A. buildings, and in hospital reading rooms.

Magazines by the hundreds of thousands are being sent to our boys, and are being read by them. All kinds of magazines full of the latest research and the knowledge of focal infection, etc. Soldiers are grasping the ideas. If you do not think so read the "symposium" in the *Items of Interest* for April, 1918, page 309, where a soldier voices the protest which we as dentists must heed, and it behooves us to "Go to the Books," so that we will be better able to answer the many questions which will be asked of us in the near future, when the boys come home.

During this generation the habit of business reading has spread among Americans.

As a boy, in Pittsburgh, Andy Carnegie was given the run of a rich man's technical library, and so enabled to lay in the knowledge that he utilized so well in later years.

To-day every business of any magnitude has a library of well chosen books.

An article in the *Publishers' Weekly* states that J. P. Morgan & Company has a library of 6,000 business books—the National City Bank 20,000 volumes and 400,000 indexed pamphlets of Commercial lore—the Metropolitan Life Insurance Company 19,000 such books.

I am glad to say that in recent years there have been established complete and comprehensive dental libraries in all large cities in this country and many notable private collections of dental books.

Have you heard about Smith's busy day? "Yesterday," said Smith as we sat at luncheon, "the man who is said to be the greatest salesman of life insurance in the world, H. B. Rosen, told me all his selling secrets; the same afternoon Elmer R. Murphey gossiped with me about his trip to Japan and told me what goods can be exported there." Smith toyed with his celery a moment and then continued, "Just before that, Professor Heilman had analyzed for me the matter of maintaining profits in 1918.

"Then there are the remarkable cases of the president of the National Biscuit Company and the president of the Mutual Film Corporation; each man got where he is in a totally different way, as they described to me yesterday. A coal expert gave me some splendid ways we can save our fuel; a girl librarian showed me how technical books make money in an office. Meanwhile I had a couple of hundred or so different commodities and devices explained." "Stop! Stop!" I cried, "You might do all that in a month, but not in a day. What do you mean?"

"I read *System*," answered Smith.

It is equally true of dentists who read their magazines each month.

Knoche talks to us of Crown and Bridge work; Colonel Logan of war work and Price on Research (in the *Journal of the National Dental Association*). From the *Cosmos*, speaks Cryer on Anatomy, the late Callahan on Sulphuric Acid Treatment, Kirk, editorially; from the *Items of Interest*, Angle on Orthodontia; Ottolengui, "Around the Table," Lourie & Case; *Dental Review*, Johnson, Black, Buckley and Coolidge; the DENTAL DIGEST, Clapp, Williams, Hollister and Kells, all bring us knowledge which we may use in our calling.

There appeared in the *Dental Cosmos* for February, 1918, page 128, an article on Dental Bibliography; "The Need of an Index of Periodical Literature," by L. Pierce Anthony, in which the writer calls attention to what has been done in the past and then proceeded to show why such records of our literature are more necessary and important than ever in the history of our profession.

The literature of a profession is the permanent historical record of its progress and advancement, and every member of this profession should be sufficiently interested in his own advancement and progress to keep abreast of the progress made by his professional brethren.

There is only one way in which the dentist can keep in touch with the advancement of his profession, and that is by constant reading of the periodical literature in which is recorded each month the latest improve-

ments and suggestions in the various methods of dental procedure. As a previous writer on this subject aptly expressed it, "the periodical literature of dentistry is a serial story, an ever unfolding record of dental achievement. Each installment, whether it be a copy of a journal, a book, a pamphlet, or a report, adds its incidents to the main trend of the story."

The dental profession has long borne the stigma of being a non-reading profession. Before writing this paper I outlined the making of a survey in one of the large office buildings in Chicago which is given over to the housing of many dentists. I was so depressed with the advice given me by my friends that I did not have the heart to go through with it—meeting with such remarks as these: "Floor space is too valuable to have a desk, books and journals." "Why, hardly a dentist would see you between the hours of 9 and 5, let alone take time to tell you how many journals he subscribed for, reads, etc." Thank goodness, that membership in the Illinois State Dental Society brings two journals at least, to every member to-day, and two good journals—the *Journal of the National Dental Association* and the *Dental Review*, but a survey should be made and if dentists are subscribing and reading dental journals, let us stamp out that stigma that dentists are a non-reading profession.

The claim has been made with some justification that the reason why dentists do not read more is that they are too busy in their practice and are too tired and mentally exhausted when their day's work is done to devote any considerable amount of time and energy to study, but in this respect we have the peculiarly anomalous condition that the busier the dentist, the more important and necessary it is that he should study and read for his own benefit in the way of learning improved and possibly shorter methods, as well as for the benefit of the community that he serves. The writer goes on to say that the time has arrived for a definite and permanent effort to be made to publish a monthly index of dental literature that will serve as an intelligent directorate guide to the busy dental practitioner with limited time available for study.

Recognizing the need for such an index, the National Institute of Dental Teachers some years ago promoted the establishment of the Dental Index Bureau to devise ways and means of publishing a monthly index of periodical literature. The Bureau proposed to publish a monthly index of, say, six journals on the Dewey decimal system of index classification as adapted to dentistry by Dr. Arthur D. Black, but thus far there have been no material developments from the project.

The Dewey index system is undoubtedly the most comprehensive system of indexing in existence to-day. I wish to digress here long enough to say that I agree with the author, and that as years go by the one

thing which will live the longest and stand out distinctively as a remembrance of the Golden Jubilee meeting (50th annual meeting) is the historical booklet, printed in the Transactions of the Illinois State Dental Society, 1914, with classified index of all papers, discussions and clinics, and personal index of administration, papers, discussions and clinics as published in the Transactions of the Society, 1865 to 1914, which carries an appendix, "The Dewey Decimal Classification and Index Applied to Dental Literature by Dr. Arthur D. Black."

Dr. Black says in this article, "This is the first publication of a classified index of dental literature on the Dewey system, and it is hoped that it marks the beginning of a new period in the attitude of the members of the dental profession toward our literature."

Further, Dr. Black says: "It is also hoped that the publication of this index by the Illinois State Dental Society will be of material aid in establishing it as the standard plan of the future in the indexing of dental literature."

We wish to here record again the saying of Dr. G. V. Black, "Good Literature, made easily accessible, serves to strengthen the mind and hand of every progressive practitioner."

The writer wishes to suggest this one step in advance in promoting the use of the Dewey index as applied to Dental Literature. If the journals, say the *Dental Review* or the *Journal of the National Dental Association* would print the index number of the Dewey classification opposite the titles of the papers as they appear in the journals, for illustration, an article printed in the journal under the heading of Abscess, Alveolar, using index in the way we have in mind—D65 would appear on the same line as the heading of the article, which means that D being substituted for the number 617.6, which is the number for Dentistry in the Dewey classification, as brought forward by Dr. Black, and 65 being the classification number given Abscesses, Alveolar. The magazine reader wishing to card index all material on Abscesses or any other subject, could take a few minutes and make out his own filing card. Cards could be standardized for this work, also filing cabinets. It is true in many instances that even students classify only that material which they think they will have use for in the future. The writer thinks this would be an incentive for every dentist to go through his journals each month, have some idea of what they contain, pick out and classify with very little work these articles which he wishes to refer to in the future.

There is no system, scheme, helps, aids, etc., that will be so simple that it will not take some effort on the part of the one who wishes to keep in touch with the literature of his profession, but it is the busy dentist, not the dentist who thinks he is busy, but the man whose time is filled with

many things in and outside of his profession, that this suggestion, if carried out by our magazines would benefit.

It has been said that an hour a month devoted to the classifying of several magazines using the system brought forward by Dr. Arthur D. Black will give a complete index of the journals covered, so the asking of our publishers to adopt this aid in classifying the articles will not incur much labor or expense and will be a great help to those who save their magazines for future reference.

It has been said that, "A fair knowledge of what that profession has accomplished, by whom it was accomplished, and when, is a kind and amount of knowledge which no member of that profession has any moral right to be ignorant of."

It costs something in time and money to acquire the knowledge which is here referred to. It is not to be found in any one book, but is acquired only by systematic and intelligent reading of all the literature of dentistry, by careful notation of the important features, historical and technical, and by comparison and digestion of these principal data. It is a kind of knowledge not to be obtained in colleges, but as the result of a continuous lifelong habit of systematic study.

The mind grows old very slowly and can be educated even late in life.

We wish to call your attention to the notice of the "Dental Library Association," which appeared in recent issues of our journals. Will insert it here, believing that there are many who have not come in contact with the announcement, which reads:

"Believing that one of the most important functions of a dental library is the interchange and the exchange of dental books and journals, it has been thought advisable by a great many dental librarians to form a dental library association, similar to the medical library association.

"Object: The fostering of dental libraries and the maintenance of a system for exchange of dental literature and duplicates. Securing and distributing the Transactions of dental societies.

"Membership: Any Dental society, association, university, college or library having a fixed home, and a dental library.

"Any individual interested in Dental Literature or Libraries.

"Benefits: The banding together of a united body with a common cause. The betterment of conditions in dental libraries. A clearing house through which books, journals, reprints or lists of these, may be sent from one library to another.

"We desire to know what libraries now exist and how many would be interested in the formation of such a society. Signed, B. W. Weinberger, Librarian, First District Dental Society, 40 East Forty-first Street, New

York City." We hope many have made application for membership, including our society librarian, for it seems to be an advance step.

There is so much moving about these days that people are in a constant state of physical unrest; that induces mental unrest which is unfavorable to real work of any kind. The possession of an auto obligates one to make use of it, to keep one's family and friends out of doors, and riding in the fresh air is conducive to sound sleep, not study. Club life in the cities takes much time which might be devoted to study, and war work is so fascinating to everyone, that one counts that day incomplete when one or more hours in the evening are not given over to helping with some phase of the work, or to listening to a patriotic address, or to the experiences of those who have been in service. Therefore, time must be taken during business hours to keep in touch with the journal literature of one's profession. If the hours are full, fees should be increased until certain hours can be devoted to study. Every dentist who runs his office, rather than have his office run him, sets aside time for laboratory work, and time for other things, why not hours for study? Everyone recalls that Dr. G. V. Black set aside the first hour of each day, for years, to study. Everyone will say that his time was well invested.

"Go to the Books." And in so doing, listen to the advice of the young Solomon, when he sang of wisdom:

"Happy is the man that findeth wisdom,

"And the man that getteth understanding,

"For the merchandise of it is better than the merchandise of silver,

"And the gain thereof than fine gold.

"She is more precious than rubies;

"And all the things thou canst desire are not to be compared unto her."

BIBLIOGRAPHY

American Magazine, March, 1918.

Advertisement.

Chicago Tribune.

Dental Cosmos, 1918.

Joliet Herald-News, 1918.

System—The Magazine of Business.

Publisher's Weekly.

The Journal of the National Dental Association, 1917.

The Dental Review.

The DENTAL DIGEST.

Illinois State Dental Society Transactions, 1914.

Bible Proverbs 3-13.

—*The Dental Review*.

THE PROSPECTS OF RUBBER CULTURE

Besides cotton, petroleum, tobacco, and coffee, rubber occupies one of the first places in the markets of the world. In the year 1903, according to the Statistical Year Book of the German Empire, there were imported 80.4 million marks' worth of raw material for the rubber industry. As the supply was considerably below the demand, this has led to a steady increase in the price of raw rubber. The rubber manufacturers calculate, according to their publications, that any moderation of the price during the next thirty years can scarcely be expected; for, in consequence of the great development of our industry, rubber has become as indispensable as coal, petroleum and so forth. Industry constantly finds new methods for the employment of this material. A lowering of the now extremely high rubber prices would immediately have in its wake new methods for its employment. The stock of raw material stored in the natural productive countries of rubber no longer suffices for the increased demands of industry, and there is an urgent need to find new sources of supply. Hence the culture of rubber by means of plantations is necessary. The zone in which rubber plants thrive includes only a few districts which economically are suitable for this culture. Borneo fulfils all demands to a high degree, likewise the island of Ceylon.

According to the *Ceylon Observer*, which is quoted by the Imperial Consul for Ceylon, there were planted in the year 1876, in the Government gardens there, about 1,700 imported saplings of the *Hevea brasiliensis*, with the intention of calling into being a plantation from which the Provinces of India might obtain saplings for rubber culture suitable to the climate. From this plantation the planters of Ceylon also obtain the trees for starting their first industrial plantations on the island.

The progress in this connection was very moderate for a long time. In the first place, because the trees require a very long time for their development until they are capable of bearing; furthermore, because there were doubts if they would supply rubber-milk in sufficient quantity; and, finally, because, in the meantime, tea culture had spread to an enormous extent. Thus, in the year 1898, there were not more than 750 acres of land planted with rubber trees. In the year 1905, however, it was calculated, according to the information forwarded by the Imperial Consul in Ceylon, that there were 25,000 acres of rubber land. In the first six months of that year there was enormous activity in the laying out of new plantations for companies and private planters.

If we take into consideration the planting of rubber trees with tea and cocoa plantations we may assume the extent of the plantation of rubber

in the island of Ceylon in the middle of 1905, in round numbers, to be about 39,000 acres. Not long ago it was maintained by a prominent expert that upon the island there was only an area of 10,000 acres fitted for the planting of *Hevea*. Since then the method of the plantation and the culture of the plant has so advanced that we can now scarcely recognize any limitation for its spreading through altitude or the productivity of the trees, the general climatic conditions and those of the soil of the island, and that it does not appear possible to give an estimate at all correct of the magnitude that may be reached by that culture.

The export of rubber from Ceylon began in the year 1889 with eleven English cwts. Since the year 1898 the Chamber of Commerce has afforded information which enables us to see the following development of the export of this material—1898, 2,792 English lbs.; 1902, 15,592 lbs.; 1903, 44,798 lbs.; 1904, 77,212 lbs.; and 1905, up to June, 49,773 lbs.

Dar-es-Salaam, in East Africa, also has become a storing place for rubber from the interior.

The rubber-tree plantations in East Africa promise, according to the statement of Geheimrat Dr. Paasache, of the German Colonial Co., a source of great income for the colony. Through the piratical treatment of the rubber trees of the primeval forests by the negroes, production has so retrogressed that prices have enormously increased. The new plantations in East Africa have now the great advantage that already in the second year they furnish, certainly not a first-class rubber, but nevertheless a very useful article. Through a new improved method of tapping they have succeeded in obtaining from the trees a very great and increasing amount of rubber without destroying the vitality of the trees. With the increased consumption of rubber, especially in the motor-car industry, over-production or a reduction in the price worth speaking about is not to be expected. This culture will have a great future for East Africa. Less comforting, however, are the accounts in regard to the rubber culture with *Kickxia elastica* in the Cameroons.

Dr. Strunk, Director of the Institution for Trials in the culture of soil in Victoria, Cameroons, has sent out sheets of questions to suitable persons in the rubber districts in the Cameroon Mountain and in the Southern Cameroons, and on the basis of these he has made a series of comparative tapping trials. Furthermore, Strunk himself personally has undertaken tapplings, and has also cut down a tree according to the manner of the natives, and has endeavored to get the greatest quantity of rubber. In this connection he has found out the following:—The quantities indicated by Schlechter in his book, "Westafrikanische Kautschuk Expedition, 1899-1900," page 237, viz.: 3.4 kg. latex "milk sap" and 2 kg. rubber from trees said to be seven years old, in no case were reached

even approximately. Trees seven years old are about 12 m. high, and 1 m. above the soil have a circumference of 50-60 cm. By felling such a tree, and exhaustively tapping it as is customary with the piratical method, Strunk only obtained 74 grs. of rubber. In the Southern Cameroon district, certainly, the quantities in latex and also in rubber are double as great as on the Cameroon Mountain. It does not, however, appear possible, according to the views prevalent, to tap in the following year trees which have been exhaustively tapped already, with the same result. The writer finds that in the beginning of the year 1905, in consequence of the produce being far behind expectations as regards the latest trial plantations, there was a feeling of depression among the planters. Even if, with older trees, the harvest is a little better, we can recognize already that the hopes which were harbored at first in regard to the extra profuse supply of *Kickxia* plantations were not justified.

From this it is clear that in regard to the import of rubber we shall for a long time yet be dependent upon foreign parts, *i. e.*, foreign colonies.—*Ash's Journal*.

A COMPARISON OF OFFICE POLICIES, WITH SPECIAL REFERENCE TO PULP EXPOSURE OR DEATH

BY OTTO E. INGLIS, D.D.S., PHILADELPHIA, PA.

(Read before the Academy of Stomatology of Philadelphia, May 16, 1913)

The dental profession is now face to face with conditions that are to the mind of the writer the outcome of policies definitely pursued by dentists or by their patients with the tacit consent of the dentist. That these policies have been pursued in ignorance, on the part of both dentists and patients, as to the gravity of the outcome, in no wise lessens the difficulties to be faced.

The difficulties lie in the presence in the mouths of a vast majority of people, who have more or less regularly employed dentists—some of them very regularly according to their own accounts—of devitalized teeth numbering from one to eight or ten, with their complications of possible abscesses. Some of these teeth have been well treated mechanically, and perhaps aseptically, or more probably antiseptically, and are without abscesses or granulomas at the apices. Some have been well treated in so far as the root is well filled, or even overfilled, while radiolucent areas are to be found. A much larger number have been only partially treated, while the canals have been easily susceptible of better filling. In many of these there are no abscesses, in some there are.

It is not the writer's intention to go into the merits of root-canal work, but to endeavor to state reasons for there having been a necessity for root work at all. It is obvious that, leaving out consideration of anchorage and bridge work, fixed or removable, in which devitalization was intentional, canal work has been necessitated by pulp exposure or close approach. Why have so many cases of this sort occurred?

There are two answers: (1) The patients have waited too long before consulting the dentist, and have then usually done so because of pain. (2) The dentist has overlooked or neglected cavities existing at the time of examination, and the patient has departed in full confidence of safety, only to suffer a surprise in an attack of pain which again takes him to the dentist.

For the first fault the remedy is education of the *clientèle* before the evil is done; such education as shall convince them that "consultation" early and often is the only method of avoiding serious cavities or pyorrhea alveolaris. The writer has talked this to his patients year in and year out, and is convinced that something more than talk at the chair is necessary to carry conviction even to those who desire to save their teeth, and believes that the time has come for a persistent campaign of education along the indicated line.

Articles should be published at frequent intervals in the daily or other publications expounding repeatedly the dangers of delay, and pamphlets dealing with various phases of dental disease and with the care of the teeth in general should be distributed to all patients, so that the knowledge shall become widespread in each community. It is by no means intended that these shall take the form of personal advertising, but be authoritative matter issued under the name of local, state, or national dental societies without even the name of the writer attached. This will involve expense for the societies in so far as the publication of the pamphlets is concerned, and the societies should be allied in this work, bearing their *pro rata* share according to membership. Outside dentists should also contribute, as it will be equally to their advantage to escape the evils of the ignorance of patients. The pamphlets in condensed form should be published by one or more societies under its or their names, and sold to individual dentists at as near cost as possible for free distribution to the *clientèle* of that dentist, and under ethical agreement. At the present time the public is getting its education largely through personal experience of individuals published in magazines.

In the second case, in which the dentist is at fault, a brief *résumé* of policies employed may be of some benefit.

There is, first, the dentist who, having complete control of his patients, orders them to return at frequent intervals, sufficiently close for at least

that form of prophylaxis which keeps cavities to a minimum size, and allows no large ones to form except as an occasional and unavoidable accident. While perhaps not so impeccable as strict monthly prophylaxis, it is still a commendable policy. Whether this dentist employs the policy of strict extension for prevention in all cases of small approximal cavities is a question to be left to individual judgment. The point at issue is that no pulp exposures shall be allowed.

There is, second, the dentist who pursues the policy of filling only cavities which can be extended readily into large contours. A well-known dentist who enjoys a highly paid practice once remarked to the writer that he paid no attention to very small cavities, but saw his patients every three months, filling such cavities as in his judgment required filling. No criticism is made if he comes within the limit of safety, but the writer is convinced that such a policy will in nine cases out of ten lead to pulp exposure, and even worse, to pulp hyperemia and death under well-made fillings. Pyorrhea can of course be prevented if the dentist takes pains to observe and treat gingival irritations.

The third class of dentists pursues the policy of attending to such work as is demanded, making little effort to control regular attendance, but such work as is done is well done, and with some effort to complete the work in each mouth. Many exposures are treated, and many pulps die after effort at salvation.

A fourth class keeps the patient in continual attendance, has the office full of patients, places medicated cotton in cavities, and suggests a return next Thursday. Small and usually cash fees are exacted, though in the end the patient pays the price in money, time, and destroyed teeth. One dentist of whom the writer knows has thus earned the sobriquet of "Spit and go home," owing to his habit of spending a few minutes on each patient and invariably making that remark. One of his patients is said to have thus spent a year and a half in having one tooth treated, though possibly some slight filling of smaller cavities was done.

The writer would finally enter a plea for frequent prophylaxis, and more especially for thorough cavity diagnosis and filling, for upon the latter much depends. It is not so easy as it seems to diagnose small approximal cavities, even the electric lamp is of no avail in many cases.

In one typical case the writer, upon complaint of the patient, separated two teeth with Perry separators, and found two approximal cavities with tiny orifices facing and closing each other; then allowed the teeth to resume their positions, and directly afterward, and with full knowledge of their presence, was unable to find them with lamp or explorer.

Even the late Dr. Miller wrote in his textbook that he has seen a number of patients, presumably of excellent dentists, who had consulted

him regarding large cavities which he thought had developed during a transatlantic voyage. Without doubt they existed, but were not discovered, before the voyage was begun. Even many occlusal cavities which should be filled are neglected, and frequently the ends of fissures are not extended.

Even with the best intentions and the right control of patients, we may be unable to prevent an occlusal exposure, but from experience the writer is convinced that such a policy is the only one that can be considered safe and sane at the present day. While it is not orthodox operative dentistry, the writer is firmly of the opinion, based upon twenty years of experience in caring for a considerable number of patients from childhood to adult life, that the strict filling of small approximal cavities as such, conjoined with other prophylactic treatment at short intervals, of say three times a year, is much superior to orthodox contour approximal work carried out because of the presence of longer intervals.

It is perfectly true that repairs are at times necessary, and even replacements required, but in the main the teeth are as well saved without pulp exposure, and are of better appearance. As before stated, however, no objection is taken to the preference for extension if, in the judgment of the particular practitioner, this be advisable.—*Dental Cosmos*.

A "REGULAR" CRITIC

Dr. Alexander Meiklejohn, president of Amherst College, told a story of his address to the graduating class at Haverford recently. It seems that President Lowell of Harvard had just published a new book and had asked his publisher to send complimentary copies to some of his friends. By mistake two copies of the book were sent to one gentleman, who promptly wrote to Dr. Lowell as follows: "Your new book reached me safely. I have read the first volume with great interest and am now half way through the second."

